THE AMERICAN

BEE JOURNAL

Devoted Exclusively to Bee Culture.

Vol. XVI. CHICAGO, ILLINOIS, DECEMBER, 1880. No. 12.

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Editor's Table.

☞ Those who remove from one locality to another, should notify us before moving, and have their BEE JOURNAL at the new post office by the time they arrive there. Delays in this matter may lose several numbers of the JOURNAL.

We shall next year give a resume of all the matters of interest contained in the monthly bee papers, as soon as they are received. Our readers will thereby obtain *all* the *cream* of the current articles, no matter where they are first published. Of course we shall give due credit, and shall kindly criticise the articles to the best of our ability.

☞ By a private letter just received from the Census Bureau, we are informed that the Tenth Census Report when published will contain full details of the production of honey and beeswax in the United States. This was by us suggested to the Bureau a year ago, and will be very valuable to bee-keepers and others.

☞ Our Index to Correspondents contains 541 new names which were not in the Index for last year. These have nobly assisted in making the BEE JOURNAL so interesting during the past year, and show its increasing patronage and usefulness. Now let all take fresh courage and endeavor to make the next volume still more useful, interesting and instructive.

To Our Friends.—If every subscriber could make it convenient to send the name of another subscriber with his own, the already large circulation of the BEE JOURNAL would be doubled for 1881. Any one sending six subscribers will be entitled to a copy like the club free for 1881.

Now is the time for the friends of the BEE JOURNAL to show themselves. A friendly word spoken now will be of more value than at any other time for a year to come. It will be our greatest aim in the future, as in the past, to elevate the profession of bee culture, to its proper place among the industries of the world. To this end we shall devote ourselves, by unremitting energy and devotion—ever looking to the producer's interest, as well as to the advancement of the science and art of apiculture.

Our friends are earnestly invited not only to renew their subscriptions at once but also to suggest to their bee-keeping friends that the Weekly BEE JOURNAL will satisfy their wants in the line of bee literature and give them full value for the money invested. Reader: Shall the Weekly BEE JOURNAL receive your hearty co-operation and support? It is working for your interest, will you not, in return, work for its?

☞ The Dowagiac, Mich., *Times*, remarks as follows on "home industry:"

"Mr. James Heddon, our townsman, who has more colonies of bees than any other man in this State, is selling some $1,500 worth this fall. Mr. E. Nugent, of Strathroy, Canada, through his agent, Mr. Norman Conklin, has just purchased $800 worth. Mr. Conklin tells us he has just visited other apiaries and has been offered colonies at much lower prices, and decided upon taking Mr. Heddon's, owing to the value of stock, style of hives, and first-class condition of the entire fixtures. Thus we see what is worth doing, is worth doing well. Mr. Conklin is an experienced apiarist, having been with Mr. D. A. Jones, of Canada, for several years."

☞ We have received several numbers of the *Musical Journal*, published by Thomas Brothers, Catskill, N. Y., at $1.00 a year. It is a handsome monthly and exceedingly cheap.

Power of the Press.—President N. P. Allen writes thus on the subject:

"I am much pleased that the BEE JOURNAL is hereafter to become a Weekly; that looks like progression. We want fresh news to read, at least once a week. I wish it great success in its "new departure." I recognize the power and influence of the press, in building up all organizations for the promotion of knowledge in every department of business. It is through the influence of bee books and bee papers, that bee-keeping has assumed a respectful position among the industries of the world. I therefore hope, that you and the editors of the different bee papers in the United States, will all unitedly labor for the success of the National Association, and the cause of scientific bee-culture in general."

☞ We call attention to the complete indexes to be found in this number. These show that the themes contained in the Volume for 1880 have been full and complete—covering all the topics of interest to bee-keepers, and this volume will make a very valuable book of reference for every apiarist. Any who have not yet procured a Binder, can obtain one for 50 cents, and it will be a very good investment, where it is not convenient to get the volume bound in the usual way.

☞ A resolution, passed unanimously at the Cincinnati Convention, was, by an oversight, omitted in the last BEE JOURNAL. It ordered 1,000 copies of the Constitution and By-Laws, with the names of the officers and members for 1880, to be printed and mailed to every member. This has been done, and any one desiring a copy can obtain it from one of the officers, or at this office.

☞ The fifteenth annual session of the Michigan Bee-Keepers' Association will be held at Lansing, Dec. 8th, when the following subjects will be discussed: 1. Evidences of superiority in different races of bees; 2. Best method of wintering bees; 3. Best method of obtaining surplus honey; 4. Practical value and cost of comb foundation; 5. Poisonous honey, ancient and modern; 6. Prevention, danger and cure of foul brood.

T. F. BINGHAM, *Sec.*

The International Food Exhibition.

On Oct. 13th, the great "International Food Exhibition" was opened in Agricultural Hall, London, England. In the report given by the London *Grocer*, we notice the following:

"One of the most prominent and conspicuous spaces occupied in the Hall is the large central stand, which is devoted to the exhibits of Messrs. Thurber & Co., of New York. The show made by this firm is an excellent and interesting one. Its chief feature is a large obelisk, 30 ft. high and 6 ft. at the base, and consisting of twelve different kinds of American canned fruits and vegetables. The obelisk is surmounted by a lamp containing a brilliant electric light. On the lamp is conspicuously painted the name of "Thurber." Samples of American cheese are placed at each corner of the obelisk, and there are smaller structures of a similiar kind surmounted by bronze figures. The design of Messrs. Thurbers' stand was the work of Mr. W. M. Hoge, their representative, and it certainly does him much credit, being striking and effective."

We are glad to see that the ingenuity and skill of Mr. Hoge is wining for him a reputation in England. He is an energetic worker, and will make himself felt, even in that great metropolis of the world. He gave an address at the Exhibition upon the rise and progress of the now enormous trade of canned meats. In the *Grocers'* report of which we find the following relative to this industry in Chicago:

"The history of the compressed corned beef trade has been almost like a romance. The Wilson Brothers started this in Chicago just after the great fire; and to show you how young this now important trade is, I will mention, *en passant*, that I bought the first case of these goods ever packed. The two Wilsons were then located in a small one-story wooden house on State street; now their factories are one of the wonders of the Garden City. Eighteen months after the business was started they were packing 960,000 2-lb. tins a month, and I doubt whether there is to-day an army, a city, or a vessel unprovided with American compressed corned beef.'

To Mr, Hoge more than to any other man living, is America indebted for developing the great demand for American honey in Europe, as well as greatly enlarging the call for it at home. This must be admitted on all hands, both by friend and foe. In saying this, we but accord to him that credit which is his honest due.

A Christmas Present.—Now that the volume of the BEE JOURNAL for 1880 is complete, we find that we have a few complete sets of numbers, and shall immediately have them bound. As a volume of reference it will be very valuable to the beginner or the more advanced bee-keeper, and will be an excellent Christmas Present for a bee-keeping friend. Price bound in paper covers, $1.50, postage paid; in nice leather and cloth binding, $2.00. Those who wish one, should order early as there are but a few of them to dispose of.

☞ R. I. Barber asks: "Is it customary for commission men to return honey crates, after the honey is sold?" Certainly not; they usually sell it to retailers and the crate goes with it. When the producer sells directly to the retailer, they are sometimes returned, if it is so stipulated.

☞ Prof. Cook and family passed through the city on Nov. 10th, and gave the BEE JOURNAL a very pleasant call. He is much pleased with the Peet queen shipping and introducing cage. In the BEE JOURNAL for May, page 214, we stated that as improved, it was a good cage, and we are glad to hear that Prof. Cook is so well pleased with it.

Errata.—On page 527 of last month's JOURNAL several errors occurred, and were not discovered until too late for correction: 29th line from the bottom of the fist column read "form" instead of *forming*; 27th line for *produced* read "producer, which if protected." Second column, 23d line from the top, should read "Buffalo Grape Sugar Co."

Poisonous Wild Honey, Etc.

Mr. A. V. McDonald, of Aukland, New Zealand, writes thus:

EDITOR BEE JOURNAL.—Do you know of any case of poisoning from eating *wild* honey, gathered from poisonous plants. I saw the following in a New Zealand paper lately:

"A curious circumstance showing the danger which persons run from eating wild honey, occurred near Maketu. A native who was on the search for honey discovered a hive close to a wharangi bush, and having eaten plentifully of the honey, he was attacked after a few hours with violent pains similar to those resulting from taking strychnine. No medical assistance was available, and the unfortunate sufferer died in the course of the night. The bees had gathered their honey from the flowers of the wharangi, which is one of the two poisonous plants to be found in New Zealand. It is well that people should be aware of the poisonous nature of this shrub, so that they may prevent their cattle from eating its leaves. Its flowers produce abundance of honey, as is indicated by the botanical name *melicope ternata*. It is easily known by its large white-backed leaves. Its general habitat is at the edges of forests."

I notice in the New Zealand papers that an acclimatization society in the northern portion or this Colony are about to import humble bees in order to fertilize red clover. Will not the pure Italians do this as well as humble bees? Is the honey from red clover good? as I notice in a late number of the BEE JOURNAL that it is questioned. Also, will humble bees be an acquisition to a country perfectly free from them? Would the amount of honey they take be of any consequence to bee-keepers? I ask these questions because more than one pest has been introduced to the Colony through carelessness and ignorance. If in event of humble bees being objectionable I should like to mention it in time.

In answer, we would remark that Italian bees do sometimes work on red clover, and that it yields honey of excellent quality very plentifully. Any insect that works on red clover will naturally fertilize it.

We do not see wherein humble bees would be detrimental; they will certainly do their part in fructifying the plants on which they work. The honey they may store will be quite insignificent when compared with that secured by the Italian honey bees, and their irritable disposition will not be very tempting to men in general to handle them.

A colony of pure Italian bees was sent from the BEE JOURNAL apiary to New Zealand last summer, and we hear that it arrived in good condition. A correspondent from Canada sends us the following information concerning another shipment of bees to New Zealand:

"Italian bees (2 hives) have been successfully carried across the tropics from San Francisco to Auckland, New Zealand. They were shipped per H. M. Ship 'Australia' with damp sponges over the combs. Capt. Cargill keeping them in his own stateroom throughout the 20 days sea voyage, via Honolulu. They arrived in splendid order in Auckland, whence one hive was sent to Coromandel, in the Thames Peninsula, Auckland; the other being sent to Christchurch, Canterbury. New Zealand with its 113 varieties of flowering shrubs and trees, its mild and equable climate, is the Paradise of the bee. Judging by the rapid increase of the black stock introduced 40 years ago, there is every reason to think that the 'immigrants' will rapidly increase."

☞ Two queens in a hive is rather a rare occurrence, but none the less vexatious, especially when attended with such results as one lately found by Dr. N. P. Allen, of Smith's Grove, Ky. At the National Convention, he was presented with a fine queen by his old friend Benedict, of Bennington, O. On arriving home, he introduced her into a hybrid colony, after removing the old queen. Still having a young queen they desired no stranger, and killed her majesty from Italy. The Doctor now regrets not having made a *thorough* search, before introducing his valued queen.

☞ Mr. F. Benton says that hundreds of colonies of bees died in Cyprus, last summer, from the effects of burning hot winds. We never felt such burning hot winds as those that assailed us in Venice, last year. They came from the desert of Sahara, and the same have evidently troubled the bees in the Island of Cyprus.

This Number Ends the Volume.

This issue of THE AMERICAN BEE JOURNAL closes the volume for 1880, and calls for a few remarks. So far it has existed only as a monthly JOURNAL, and as such has gained an enviable reputation and influence. Its visits to thousands of homes all over the world has been greeted with an enthusiastic *welcome*, and its teachings on the all-absorbing subjects of "bees and honey," have been as anxiously looked for as they have been essentially adopted by apiarists not only in every State, Territory and Province in North America, but also in Europe, Asia, Africa, and Australia.

Neither war, pestilence, financial depression, partial failures of crops of honey, nor the foolish jealousies and merciless abuse of evil disposed persons, has been able to materially hinder its steady *onward* course. From year to year it has increased the number of its pages to give its thousands of readers and correspondents an opportunity to participate in an interchange of thought and fully discuss the various topics of interest that are ever and anon presenting themselves to the apicultural world for investigation and decision.

Still its capacity is too limited to accommodate all its correspondents, and its monthly issues are too infrequent to satisfy the longing for intercourse found in its many patrons, and to solve vital scientific questions frequently arising in the management of an apiary which require a more speedy solution. We have therefore determined to celebrate the twentieth year since its birth, by further enlarging its capacity and issuing it *weekly*. The bare announcement of this fact, in our last issue, has called forth a perfect storm of applause from its friends in the East, West, North and South; and multitudes of letters come by every mail, not only approving the plan of issuing the BEE JOURNAL weekly, but assuring us of hearty and continued support.

Each weekly issue will contain more than one-half the amount of reading matter heretofore given in the monthly—thereby *more than doubling its present capacity!*

In order to publish the JOURNAL at a price so low as to be within the reach of all, it becomes necessary to assume the popular form of weeklies, enlarging the size of its pages, so that each one will contain more than *three times* the amount of reading matter on those of this size. Eight of such pages will contain as much as 26 pages of like this one, equal to 1.352 of these pages in a year, instead of 592, the number contained in the BEE JOURNAL for 1880.

It will hardly be necessary to state that we shall devote all our energy and determination to make the JOURNAL even more interesting and instructive than it has heretofore been, if that is within the range of possibilities. Its record, character, power and usefulness, in the past, will be its guarantee for the future. When others have fainted and fallen by the way, it has made more determined efforts, by enlarging and improving—ever keeping in view the one grand object of its existence, that of furthering the interests of honey producers, by losing no opportunity to create a demand for this God-given product, opening up *new* avenues for its use, creating new demands and eager purchasers, both at home and abroad—thus benefiting every honey-producer.

With this issue several thousand subscriptions expire, and as we do not wish to lose any of them, we earnestly invite ALL to promptly renew, and thus save us the unnecessary trouble of taking the names from our mail list, and having to replace them again in a few days. Promptness in this will save us much valuable time and perplexity.

The WEEKLY will be published every Wednesday, and mailed on that day to every subscriber, for $2.00 a year, postage included; six months for $1.00; three months for 50 cents; making it within the reach of every bee-keeper. When bank bills are not available, postage stamps may be sent.

Each number being complete in itself, will be fully indexed; therefore, those who desire only to take a monthly, will be furnished the number published on the first Wednesday of each month, for **50 cents a year.**

Those wishing it semi-monthly, can have the numbers published on the first and third Wednesdays of each month, for **$1.00 a year.**

By this *elastic plan*, all may be accommodated who desire to invest 50 cents or more in a bee paper.

We give an extra copy to any one who will send a club of six for either edition; this is intended to pay for the time and labor of getting up the club. As before stated, we have abandoned the club rates, because they are an injustice to those who are not favored with an opportunity of joining a club, and are often the cause of dissatisfaction on that account.

Those who desire to second our efforts in giving them a weekly BEE JOURNAL, are earnestly invited to co-operate with us in every way to make it a success.

The Honey Season in Scotland.

Mr. J. Lowe, of Edinburgh, writes as follows to the London *Journal of Horticulture*, concerning the season of 1880 in Scotland:

The past spring opened promising enough considering the sad condition in which the previous autumn found our colonies both as regards population and stores. Inauspicious weather supervened, however, and being somewhat prolonged, breeding went on so slowly that in April little progress was perceptible, the older bees disappearing faster than the accession of the young from the brood cells, so that the weaker colonies dwindled away, simply from want of a sufficiency of bees to carry on the necessary work. More favorable weather followed in May and June, and breeding was again in full progress. Still swarming was not so general as in ordinary seasons, and honey-gathering was extremely meagre. Summer honey-yielding blossoms were not so plentiful as usual, and as time went on appearances became even more gloomy; so that bee-keepers like myself, who do not benefit by a proximity to white clover pasture, had a poor return of flower honey, and in some cases feeding had actually to be resorted to prevent starvation. But another chance still remained. The heather season was at hand. August commenced under auspicious circumstances; good weather set in early in that month. The bees were forthwith dispatched with all haste to seek their fortune among the Pentland Hills, and retrieve, if possible, the short-comings of the summer, and not for many years has there been a fairer prospect of success. The heath was rich and luxuriant, its purpled blossoms abundant and opening. Could the result under such circumstances, and with a continuance of good weather, be doubted? In a little over four weeks these comparatively empty hives were brought to their summer stands laden with golden stores, some having gathered from 40 to 50 lbs. of honey.

Scottish apiarists who have thus availed themselves of sending their hives to the moors and heath-clad hills will find them, even after the appropriation of some well-filled supers, in splendid condition for winter; and it may be hoped that having at last obtained, on the whole, one good honey season, it may be the harbinger of a series of prosperous years to follow.

Science.—The thirteenth number of the Humboldt Library of Popular Science is received. It contains Prof. Alexander Bain's new work entitled "Mind and Body; the Theories of their Relation."

The author brings to the examination of the immemorial problem of the philosophers the erudition of an accomplished scholar and the method of the modern scientist. His work may be regarded as the latest authentic expression of the modern scientific school upon one of the most important questions that have ever agitated the human mind. Price 15 cents. I. Fitzgerald & Co., publishers, 143 4th Avenue, New York.

☞ Sample copies of the Weekly BEE JOURNAL will be sent *free* to any names that may be sent in. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office.

Correspondence.

For the American Bee Journal.

The English Honey Markets.

W. M. HOGE.

I send you by this mail a very truthful lithographic picture of the lady president of the British Bee-Keepers' Association, the Baroness Burdett-Coutts, as well as the young American gentleman, Mr. Ashmead Bartlett, to whom the Baroness is reported to be betrothed. This rumored marriage is the present sensation of London. Not only the great discrepancy in the age of Mr. Bartlett and his fiance, she being 64 and he 28, attracts attention to the happy pair, but the whole-souled liberality which has characterized the Baroness' stewardship of perhaps the greatest fortune in the world, and a constant and kindly disposition to alleviate the distress and suffering of those about her, has garlanded her name with the tenderest feelings of gratitude, and made all the nations feel that the world is better for her having lived. Mr. Bartlett is one of those noble souls that even men cannot help loving. It is reported that the marriage has been delayed in order that a legal question may be circumvented concerning the reversion of a large portion of the Baroness' heritage in case of her espousing an alien to the British crown.

The Dairy Show commences here on the 26th of next month, lasting four days. This is held under the presidency of H. R. H. the Prince of Wales. The British Bee-Keepers' Association exhibit at the show. Neighbour & Sons have new English honey stored in American sections attractively displayed in their windows, placarded 2s. (50c.) per pound—mostly unglassed.

Consignments made by California producers and commission merchants to Liverpool, London and Hamburg, which, although they netted a present loss at the time, have been pregnant of much good, for they introduced a superior article to the European markets, the consumers got hold of it and liked it. Thus the influence of the consumer is all the while working in the favor of American honey, grocers' customers come back saying they "want some more of that American honey." Thus you see the demand arises and this year English and continental buyers have either sent agents to, or employed agents in California to secure them honey, and here comes the verification of the old adage that in competition lies the life of trade, for the agents being unable to procure consignments have had instructions to buy, and in the presence of so many buyers, honey has been sold out-and-out without the necessity of consigning, and at prices that must be remunerative to the producers. The San Francisco markets quoted "Honey in demand with a strong upward tendency;" the bulk of the purchases have been moved forward by the "all ocean route" which requires 3 to 4 months to make; the parcels which were shipped the latter part of August and September will not be due here until about Christmas, too late I am afraid in many cases for packers to get it ready in jars, etc., for the Christmas trade. I have managed to get forward several car loads, which were sent early across the American continent by rail to the eastern states, and thence by steamer. This enabled me to come into the market here almost abreast with the domestic honey and realize a better margin of profit than I will on later shipments. Yesterday there was not a single pound of California honey remaining unsold. We sold none for less than 12 cents per pound in ton lots. Then first parcels have all been strictly white in color, and heavy in body. When the anticipated large shipments arrive the markets will no doubt be affected, and prices decline. There will be some white clover honey wanted, one or two sales having been made at 10c. per pound "free on board" at New York, but your readers should mark this is not for *basswood*, for which strange to say there is no demand; consumers are prejudiced against it and the preference or prejudice of consumers is the all-powerful factor which makes or unmakes trade.

It is with the greatest imaginable reluctance that I announce my despair of there ever being a satisfactory traffic in "prize" or the section honey. If they could be distributed everywhere with the combs safe and sound, they would be the most salable article ever introduced to the grocery trade, but to deal in them now, is to live in a perfect atmosphere of complaints.

The value of Chilian honey has remained nominal, pending late arrivals in this country, being placed upon the market; 2,789 barrels arrived per "Craignair," "Pole Star" and "Osceola."

London, England, Sept. 20, 1880.

[Mr. Hoge has our thanks for the very interesting particulars about the honey market, as well as for the lithograph mentioned.—Ed.]

For the American Bee Journal.

Honor Justly Bestowed.

P. P. COLLIER.

In looking over the proceedings of the meeting of the North American Bee-Keepers' Society at Cincinnati, I find many things of interest and practical utility—both to the young and old, to the learned as well as unlearned; indeed it would be a great blank in apiculture were it not for this association—this source of information indispensable to the interest of progressive thought, and progressive work in all branches of apiculture. I find that the subjects treated upon, were handled with great ability.

While for 2 years there has been at the head of this association one who has given it honor, credit and influence, both at home and abroad, one who has worked hard for the success of this Society, and one who every American feels proud of, and sincerely thanks for his success in building up this Association—while we regret to give him up, yet we feel proud to say that the selection made as a successor is every way befitting, and an "honor justly bestowed."

Dr. Nathan Perry Allen, of Smith's Grove, Ky., our new President, is one whom I have been acquainted with from my youth up; almost my first schooling was under his direction, and having been very intimately connected as neighbors and friends, I know whereof I speak. Almost my first lessons in bee-culture were learned in his apiary and under his instructions. Well do I remember his first colony in a "gum" given to him by his father for "good luck" on going to house-keeping. His first honey was taken in tubs, but a better day came, a "patent" hive (standing some three feet from the ground) was purchased, moth-proof, everything but a "real bee hive." But this was soon abandoned with many others until the Langstroth hive made its advent. This the Dr. seized, and to-day hundreds are using this truly meritorious hive, from his influence. The first bee orgaization I ever attended and the first ever in Southern Kentucky to my knowledge, was organized at his magnificent residence—the Southern Kentucky Bee-Keepers' Association," and through his labors as its president, "it became a power in the land," and its influence will long be felt.

The Dr. is one of the best dentists in southwest Kentucky; one of the best farmers, as well as his superior knowledge in handling and propagating fine sheep, cattle and hogs—indeed it is only necessary for an effort to be made and success seems to crown his labors. I believe the Association to which he is elected President will grow under his administration.

Our bees seem to be in fair condition for winter; early frost killed late buckwheat and it gave but little honey.

Mexico, Mo., Nov. 8, 1880.

Prairie Farmer.

Preparation for Winter Quarters.

MRS. L. HARRISON.

In what ever way bees are wintered, whether in a cellar, or in a receptacle built purposely for them, or upon their summer stands, the conditions should be such, that they will be dry at all times. Bees can stand cold but not dampness. Every one who owns bees, whether his colonies are few or many, should make the best use of the means at his command, to protect them against the severities of the coming season. In order for a farmer to sleep well, his farm must be well fenced and free from mortgage, and if the bee-keeper wishes to enjoy cracking jokes and nuts around his fireside, while there is a howling blast without, he must know that his "little pets" are comfortable.

We winter our bees upon their summer stands, and with the light we now have, we think in this locality, taking the seasons as they run, some warm and others cold, it is as good a way as any. To winter successfully the colony should be of fair size, with plenty of young bees and well ripened sealed honey, and last but not least, a good warm hive with a tight roof.

In lieu of theory, we will now tell our readers how we have prepared our bees for winter. The honey season did not close with us until the 15th of October; during the early part of that month, honey came in freely and as fast as a bee hatched, the cell was filled, until the main hive was almost solid honey. Fearing for the safety of our apiary, we procured an extractor, and threw out the honey from two combs of each hive, thus giving them room to rear young, and to cluster in. The first days that we were extracting, honey and pollen came in freely, but before we were through the season closed. After the cappings were drained, we fed them to the bees every fine day, and they sucked them dry, and no bad results by robbing followed.

After scrubbing until it was free from dust, some old, red and white Chinese matting, we cut sheets from it, of the

exact size to fit nicely when laid upon the frames over the bees. We have formerly used duck, and some sheets cut from an old ingrain carpet, but they were so covered with propolis that the moisture could not escape: but the matting is porous and yet will confine the bees below. Above the matting is placed a cushion, of about six inches in thickness, filled with chaff. We have learned by experience, that the best material for this purpose should be thin and open, yet strong enough to hold the chaff. Old coffee sacks answer the purpose well, but they are more expensive than muslin, as they cannot be made so readily on the machine. The sack for the cushion should be sewed up, and then the corners sewed across diagonally in such a way that the cushion will be square sided when completed. The idea may be obtained by pushing in the corner of a pillow. These cushions if cared for will last many years. We give a free circulation of air above the cushions, and contract the entrance—care is given that there shall not be any cold draughts through the hive.

We have several small colonies, that we have confined to the frames they can cover, by means of division boards, filling up the space between the board and hive with some warm material—these baby colonies are often our very best, the following season.

Peoria, Ill.

For the American Bee Journal.

Origin of the Albino Bees.

S. VALENTINE.

During the past season I have received many letters asking information in reference to the origin of Albino bees. As it is considerable trouble to answer each individually, I desire to answer through the BEE JOURNAL.

First, the Albino bee has been produced by crossing the light Italians. In July, 1876, I bought an Imported queen from Mr. Willman, of Pennsylvania, from which I produced Albino bees. I made a cross with some beautiful, large, bright drones from a home-bred mother (of what we termed Argo stock) and in August, 1877, I had several granddaughters of the Imported queen that produced about ¾ Albino workers. Those bees were the most vigorous I ever saw and yet were very gentle. I noticed in carrying dead bees from the hive they generally dropped them from 4 to 6 feet, whilst others carried them only from 1 to 2 feet distant.

My curiosity was aroused and I paid Mr. Pike a visit to see his Albinos, and I bought a queen of him (though she did not produce *pure* Albinos), I crossed again with her and then bred them pure, and I have succeeded beyond my expectation; having had them pure during the last two seasons and am proud to say that they are still improving. As honey gatherers they compete with the best, and as to beauty and docility or gentleness I feel safe in saying the world cannot surpass them. This is the origin of my downy and white-banded bees.

I received a Holy Land queen in September, whose progeny are much like Albinos. The queens and workers are very active (I fear they may not be as pleasant to handle). As I received her too late to make any test, I cannot say anything definite. I have several daughters of the Holy queen now laying, that mated with Albino drones, when they are tested I will report. I think it would be well if all the queen breeders that are experimenting on the new bee would report often and compare results. If they prove to be better than those we now have, the sooner we know it the better; and on the other hand if not as good, we cannot know it too soon.

Double Pipe Creek, Md., Nov. 4, 1880.

For the American Bee Journal.

The Bee-Keepers' Conventions.

JAMES HEDDON

While I regret very much that I could not attend either of the main Conventions of the season—no, not even the North-Western, at Chicago, only 100 miles away—I do rejoice that we have the means of knowing what "the boys" were about there.

First, in regard to the first discussion of the Chicago Convention on overstocking. Most of the opinions given were of a mixed, "don't know" character. I believe them perfectly candid, for they coincide with my own *exactly*. The few that did have any settled opinions, mainly were on the side of the hopeful. I am sorry that they failed to give us any evidence of their belief that very many colonies can be kept in one locality with about the same profit as a small number.

The point, just where a locality is over-stocked and it becomes necessary for the producer to move off a part of his stock to a second apiary, is one of vital importance to the main honey producers of this country. Can we not get some practical information upon this subject?

Let us skip over to Cincinnati.

I am struck forcibly with the truths set forth in the President's essay on the "Best methods of marketing honey." The more so, because I have practiced just what is set forth there, hence I may say I know the truth of the statements made, until we come to the latter end of the paper, where he says that "the demand is increasing fully as much as the production." About this I do not know. For 2 years we have not had the average product thrown upon our markets. Bees, fixtures, determinations and sound ideas of production, have increased much faster than surplus honey, owing to the off-years for the latter product. How I wish the belief of the writer was a known fact, even to myself—how I would rejoice. But I am destined to "wait a little longer," and keep my hat on my head and out of the air, for the present. Near the close, the essayist informs us that some of the more frightened ones are beginning to hear the voice of success whispered in their ears, etc. Is not the tone of this sentence fitted to scare the timidly moral? I mean, to cause a man, when honestly convicted of an error, to still stick to his error, *knowing* now that it *is* an error, but frightened lest he be called "inconsistent?" I do not mean that the sentence was *intended* thus, but only ask if such would not be its influence? I have an adage like this: "He does best who predicts aright; he does *next* best who manfully owns right up to his mistake." How many of you who have written considerably for the JOURNAL, have gone back through a half dozen years and read over your own assertions consecutively? Were you not astonished at the honest errors, weaknesses, etc., that showed themselves in the greater light of progress? To be just right today about all things, is to idly sit and rot during the future. Where is the man who has written a "bee book," that cannot now look at it and wish he had a chance to say this and that over again? I think I know that Doolittle is wrong in regard to the merits of comb foundation. I feel sure he will have to come over among our crowd ere long, the same as many of us have done. When he comes, I hope to see him come head foremost, in the front gate; not coming feet first through a small hole in the back fence, where some one has by mistake left a board off.

I deem it a crime to try to mislead our fellows, especially in the art of production, and through the public print; and a *foolish wrong* to doggedly stick to a convicted error, and no one should ever knowingly lend any influence in that direction; "honor bright," should they?

"If I am right, thy aid impart
Still in the right to stay;
If I am wrong, teach me the art
To find that better way."

It should not be forgotten that the "children of fear" have not *yet* met those who overflow with enthusiasm, nor should it be forgotten that *each* squad is slowly but surely traveling toward the other. Had not the "scared ones" blown their horns, the "gushers" would have said: "Come where we are; you *must!*" and I tell you, it is not near as good ground to stand upon, as where we are both fast approaching.

Do you forget the kind of music we were invited to dance after? I quote the following, which I clip from the *Dominion Pet Stock Bazaar*, and copied by that paper from the *Indiana Farmer:*

"BEE PROFITS.—A hive of bees can, with ordinary management, be doubled every year for several years. Let us figure a little and see what the result will be, say for 7 years. In the fall of the seventh year we have 64 colonies; 20 lbs. of honey to the hive every year will be a low average for that length of time; 15c. per lb. is not high for honey; we have 2,540 lbs. for 7 years; that at 15c. makes $381, if I have made no mistake. The 64 colonies, at the low rate of $7 per colony, makes $548; this added to the value of the honey gives the snug sum of $820. This is no big thing, but is enough to pay all the trouble it costs. Some will say it looks well enough on paper, but not one man in 50 can do that well. I believe it can be done every time with proper care. I would like to hear some of our bee-keepers on the subject. If they think I am extravagant in the figures given above, let them say so."

I conceive that the writer's knowledge or his honesty are as badly at fault as his figures. May-be he is too modest to name the real amount of wealth that these 7 years of patient waiting will wriggle out of one "skep." I make it 128 colonies, and $1,658. Am I not correct? What is the use of our taking $820, when the figures allow us $1,658? Suppose that the writer *knew by experience* that such increase and sales were possible, it would undoubtedly have corrected his sad mistakes in mathematics. I hope the above will show some of the more enthusiastic that they have undergone a growth.

I cannot help being mistaken sometimes, but I can and *will* help being dishonest enough to try to cover it up.

But I am as much pleased as any man among us, that times for the honey-producer *are* better, and have a better outlook.

I think the essayist referred to in the beginning of this article has rather over-estimated the extent of my conversion. Don't mistake my ever-readiness to back up and off from each *inch* of untenable ground as quickly as I see it, for an admission of the other extreme. I am glad of the new light of better prospects, glad of the essay, and hope to see the Chicago North-Western Bee-Keepers' Association excelled by none in the country, and that it may be my lot to be at the next meeting.

Dowagiac, Mich., Nov. 11, 1880.

[We are glad of our friend Heddon's honest criticism. The communication of Mr. Hoge, on page 555 of this JOURNAL, proves that consumption has increased fully as much, if not more, than production. No one who knows Mr. Heddon, could think he would hesitate a moment to embrace a truth or discard an error, as soon as it becomes apparent to him. Sometimes he is a *little* slow in seeing it, but that is often a *good* fault, if we may use that term. He is cautious and honest in his convictions, and though we are often compelled to differ with him, yet we shall, we hope, ever remain the best personal friends.—ED.]

For the American Bee Journal.

Over-Stocking a Locality.

GEO. W. HOUSE.

The subject of over-stocking is an all-important one, and at the present time is much discussed in our bee papers and at our Conventions. Intelligent and practical apiarists know that it is an easy matter to over-stock any locality; but still there are some who claim that a location *cannot* be over-stocked. Whether this is owing to a lack of knowledge, or with an intention on the part of the writer for increasing the sale of bees, is a question to be settled by the reader.

In the report of the last National Convention, page 518, of the AMERICAN BEE JOURNAL, Mr. D. A. Jones thinks it very difficult to over-stock any good location with bees. He says he is "satisfied that over-stocking is an imaginary evil, and one of the improbabilities in a good locality for bees. He had 300 colonies in his home apiary, and at another locality but a few colonies, entirely out of range from any other bees. This latter bee range is quite as desirable as the former, and the bees equally as good and strong, yet they stored no more honey per colony." Then, again, Mr. Jas. Heddon, in his essay on "Apicultural Failures," at the National Convention, page 537, AMERICAN BEE JOURNAL, says, "Now bee-keepers who would succeed, it rests with you to know that a divided field will not pay any one, and act accordingly. If you expect to avoid 'apicultural failure,' choose an unoccupied field."

Now, why this diversity of opinion? I claim Mr. Heddon is right. Let us see. Mr. Jones says he has an apiary located away from his home apiary. Now, if you cannot over-stock a location, why did Mr. J. make his second apiary? The expenses would be less, and then it would be much more convenient to have the bees all in one apiary. Again, Mr. J. says he will this fall plant 28 acres of Bokhara clover for his bees. I believe much benefit can be derived from planting for bee pasturage, to fill in the gap between the bloom from which we secure our yield of honey.

But to our subject again: Suppose there were 100 colonies on each side of Mr. J., north, south, east and west, and within 1½ miles of his home apiary; what would be the consequence? I fear Mr. J. would feel like growling, and would not think over-stocking an "imaginary evil." Again I say, over-stocking a location is a very easy matter. I know this from experience. Let me illustrate. At our home apiary of about 100 colonies, we have within 1½ miles about 400 colonies of bees in every direction. Our bees in their flights are, therefore, cut off on every side, and the result is our yield of surplus honey is light, and with only a moderate flow of honey, *no* surplus is secured. At apiary No. 2, of about 200 colonies, and located 5 miles south, our yield of surplus honey is three times the amount secured at our home apiary. At this apiary we have an undivided field. Apiary No. 3, of about 150 colonies, and located 10 miles south, gives us about the same results as apiary No. 2. Here we also have an undivided field. The localities are *all* one equally as good as the other; but our home apiary is over-stocked, and we see the results. Some localities can be over-stocked with 100 colonies, while others would keep 300 colonies.

Every bee-keeper should make his location a study until he is able to know just how many colonies he can keep profitably. Then if you feel confident of being able to manage more bees, you should seek a new location. Locate where you find the most bloom—willow, fruits, clover, linden and fall flowers—

the more bloom the better. But seek for some valley where you are protected from the winter winds and your bees are close by the willows, thus enabling them to get the honey from this source in the early spring, while it is yet chilly. I might say much more upon this subject, but fear I am occupying too much space already.

Before signing I would say: If you do not believe these words to be facts, go into the neighborhood of some of these men who think over-stocking an "imaginary evil," and talk of locating an apiary near them, and if that man has any influence over his neighbors you will know it very quickly.

Fayetteville, N. Y., Nov. 11, 1880.

For the American Bee Journal.

My Report for 1880.

E. A. MORGAN.

As I see that many bee-keepers are now making their reports, I will send in mine. My neighbor, McNay, makes a good showing, but his pasturage is not as good as mine.

I had no success in wintering and only had 14 colonies left out of 27. It was too warm and they were not well ventilated. Of the 14, only 3 were colonies, the rest were nuclei.

My plan is to take out all combs but 2 or 3, or what the bees can be crowded upon, by using division boards and keep them crowded, until these are full of sealed brood, then give another and so on until the hive is full, thus getting the combs full to the top and ends. when the hive is full then put on upper story for surplus. If any are short of stores hang a frame of warmed honey in the hive, cold honey is injurious.

I worked for comb honey until the colonies showed signs of swarming and then began to extract, consolidating all unfinished sections on a few hives, extracting the others, and feeding to these at night. In this way I secured 200 lbs. to each hive, on an average.

My colonies increased to 28 by natural swarming; 3 I broke up into nuclei and have sold 56 dollar-queens from them. My bees are all Italians, from an imported queen and a descendant of a tested Oatman queen, and are almost non-swarmers.

The weather has been good during the season, and the yield at all times has been large.

I believe with Mr. H V. Train that Italianizing by the drones is better than by the queens, for wherever my neighbor's queens have met my drones they seem to be nearly pure Italian bees, and where pure queens meet black drones they seem to be nearly all blacks. I once had hybrids that were uniform in color, every bee showing 1 band and no blacks with them.

I think the size of a colony must be determined before we can secure large crops of surplus honey. A neighbor said to me last July, he had 6 colonies from 1 colony. I invited him to come and see me extract, the next day, when he said to me, "my 6 colonies would not make one of yours."

I consider the Italians far better than blacks because they are more hardy and live longer. This is why they are always strong, and the blacks strong only in hot weather. Strong colonies give the surplus and I think 3 pecks of bees a good colony. Each of my 24 colonies would measure that much, and I took 4,800 lbs. of honey from them. I have sold 2,000 lbs. at 20c. and have the balance on hand.

Farmers here sow red clover with their wheat in the spring for fall pasture and to enrich the land. It springs up after the wheat is cut, gives a small stunted blossom and yields honey profusely. I have honey marked apple blossom, dandelion, white clover, basswood, buckwheat, red clover and golden rod. Each yielded abundantly this year.

I think there is no better pollen for early spring breeding than the alder; it gave pollen this season on March 19, and on April 19, 3 colonies had started the sections; I lost no time from that on. I was always watching and knew the exact condition of every brood frame and section and did what was needed to be done.

Here I found Italians ahead again, for in opening an Italian colony, giving brood, exchanging combs or extracting, they work right on, while blacks are scared and buzz for an hour or two, and stop work for the day; this I proved last season. One colony on the scales gained just 12 lbs. every day. One day at noon the scale showed 5 lbs. gain, when I opened the hive and looked them over, in the afternoon, showed ½ lb. gain. An Italian colony treated the same, this year showed 5 lbs. up to noon and 7 lbs. from 12 until dark. All will admit this to be so, that have handled both kinds of bees.

As all, or nearly all, report a poor season this year; it seems that my neighbor, Mr. McNay and myself have had an extra yield; this I think is due to locality, for bee-trees cut down in the woods are giving 100 lbs. of nice honey.

Arcadia, Wis., Nov. 9, 1880.

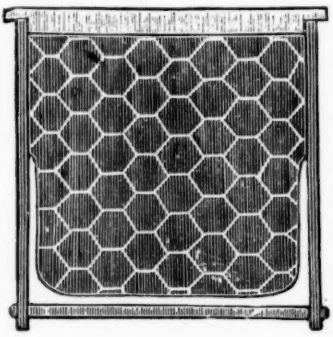
For the American Bee Journal.

The Sagging of Comb Foundation.

W. G. WALTON.

The sagging of comb foundation, while the bees are drawing it out, seems yet to be a question of doubt even among leading apiarists. In the September number of the BEE JOURNAL I noticed an article by Mr. James Heddon on this subject, which surprised me somewhat. I dislike to disagree with a man like Mr. Heddon on any question of bee-culture, but I must say that I think he is behind the times on comb foundation.

The following engraving will show my method of placing it in the frames. I gave the same idea in a letter published on page 314 of the BEE JOURNAL for 1876. I had used it previous to that date and since, and tried it thoroughly before giving my method. I have shown this



plan to about 100 bee-keepers who have tried it, and have thus far failed to find one that ever had the foundation sag so much that it could be noticed, or built crooked or buckle. I have made in my own apiary, I presume, during the time since it has been invented, thousands of combs by this plan, and never had the slightest trouble, and we have it as hot sometimes as 103° in the shade. I see Mr. D. A. Jones is recommending the tin-pointed comb-holder, to hold up the comb foundation while it is drawn out. I think the wired foundation is of no value in this latitude, for if comb foundation is cut as shown in the above engraving, with a saw-mark deep enough in the top-bar to let it go up ⅛ of an inch, and either nail or wax along the top, as well as wax half way down the side, where the comb foundation touches the wood, it will not sag. I should like for Mr. Heddon, or any one who has not already tried it, to do so, and report in the BEE JOURNAL.

I think I was among the first to use comb foundation in Canada, and have had considerable experience with it. I have never had any, with the exception perhaps of a dozen combs (while I was experimenting with it), but what has been straight, beautiful, and all alike, and no drone cells in any of it except when I desired them. All that is required is ordinary foundation, cut in the above shape, made on any machine, out of pure wax, to make straight combs without sagging, although I prefer the Dunham over any make I have yet seen.

If any one should ask why those points are left at the bottom corners of the frame, in the above cut, I can inform them it is to save the queen and bees from being hurt when sitting the frames on the ground, about the hive, either upright or on the side, as well as forming a guide for the same purpose, while lifting the frame out of the hive, of which there is great danger, especially with a young queen, when she runs down to the bottom-bar or side to hide while the frames are being moved.

Hamilton, Canada, Oct. 8, 1880.

For the American Bee Journal.

Systematic Bee-Keeping.

O. CLUTE.

Order is one of the first elements of success. The merchant whose business is not in order is constantly harassed with difficulties, and, in the end, fails. The farmer who conducts his work without system will ultimately have an exhausted soil, short crops, poor prices, and a ten-per-cent. mortgage that blankets all his acres. The bee-keeper who runs his bees in a systemless way will get but little benefit from the good seasons, and will be utterly routed by the bad ones.

1. A work-shop, or "bee-room," as my children call my shop, is very important. This may be a room in the house, a part of the wood-shed, a corner of the barn—any place at a convenient distance from the hives, where all tools and appurtenances of the apiary can be kept, and where work can be conveniently done. In this room are the work-bench and the tool-closet. In this room the bee-keeper can profitably employ every rainy day throughout the season. An old stove that has been discarded from the house, with a little fixing, can be made to do duty in the shop for several years. Then in fall and winter and early spring full preparation can be made for the next summer's campaign. Hives can be made and painted; frames

can be made and stored away; racks for sections can be made; the sections themselves can be made, the starters put in, and the sections put into the racks, so that when the hurry of the white clover or the linn season is come, the labor of preparing for the surplus honey will be so nearly done beforehand, that a few minutes will suffice for putting on the racks.

In this shop all the fixtures for extracting can be arranged, and the extracting can be done with the least possible amount of carrying and lifting. Here, too, the extracted honey can be put into kegs, cans, pails and jars for market. Here the comb honey can be neatly put up in crates, and stored until time to send to market. By the enterprising bee-keeper such a shop is needed every hour of every day.

2. Every bee-keeper should adopt a frame most suitable to his needs, then have all his frames made exactly alike, and have every hive so made that any frame will fit instantly in any hive. Let all the parts of the hives be exact in measurement, so that lids or caps, alighting-boards, division-boards, surplus-honey racks, feeders, second-stories, are each exactly like every one of its kind. Then there is no trouble or fuss about fitting. When you take up one of these articles for use, you are confident that it will fit the place for which you want it.

3. The arrangement of hives in the apiary may be so made as greatly to facilitate the labor. Having chosen a spot with suitable exposure, put the hives in groups or rows so that each hive can be easily approached and conveniently manipulated. At the same time give the hives such symmetrical arrangement as will be a pleasure to the eye. In arranging hives in the spring, allowance of space should be made for whatever increase you expect to make, so that as the new colonies are made, the hives need not become huddled and disorderly. Let every hive be conspicuously numbered. With stencil figures and black paint, this can be done easily and rapidly.

4. Now keep a stout pocket memorandum-book, with the pages numbered in order. Let each page of the book be devoted to the hive of corresponding number. Then any hive's record can always be turned to instantly. Keep a full record of each hive. First in importance in this record is the age and quality of the queen. Let this always be kept in view in examining your hives. If a queen is lacking in any desirable qualities you soon learn it, and can supersede her. If one or more queens give a remarkably good record you know it, and can breed your next year's queens from them. In this memorandum book all important items can be noted, then, as the book is examined from time to time, you have before you the exact history of every hive, and know at once what work needs to be done for each—number 59 needs more frames, number 65 needs to be extracted, the racks of sections must go on numbers 13 to 46, new queens must be given to numbers 49, 53 and 70. So the labor of each day can be carefully planned and provided for, and when that labor is done you have the satisfaction of feeling that it counts something in permanent value for your apiary.

5. Make out a full plan of each year's work, and then adhere to the plan as closely as the season will permit. Of course the wise bee-keeper must adapt himself to the conditions. If a poor season spoils his hopes of honey and increase, it cannot be helped. His good plans will come to naught. But finding that his old plans are impossible he at once studies the conditions, and adapts himself to those conditions, and so turns what would otherwise have been a certain and disastrous failure into a comparative success. How many hives shall I run for comb honey, how many for extracted honey, what increase shall I attempt to make, how many old queens shall I replace, from what colonies shall the queens and the drones be reared, at what time or times in the season shall the increase be made?—these and numerous other questions the careful bee-keeper will ask, and, having answered them to the best of his ability, he will so plan as to accomplish the desired ends in the best way.

6. The bee-keeper who works by system will have his harvest at the end of the year in the best shape. The comb honey is in nice sections or boxes, stored in neat crates. The extracted honey is in good barrels or kegs, in tin cans, or tin pails, or glass jars. Honey in this shape will command the highest market price. And if the producer does not want to push his product upon a glutted market, he has that product in such shape that he can keep it for months without deterioration. It is, too, in such shape that he can ship it to distant markets East or West, or even beyond the sea, and so avoid the fierce competitions in the glutted markets of the small towns in his neighborhood.

7. This systematic bee-keeping implies an acquaintance with what has been learned by careful observers in the science of bee-keeping all over the country. This knowledge can best be ac-

quired by reading. The periodicals devoted to bee-keeping are indispensable to him who would keep up with his business. And the valuable books of Prof. Cook, L. C. Root, A. I. Root, and T. G. Newman should have a place on the book-shelf of every enterprising student of this fascinating employment. I venture to suggest that John Allen's "Blessed Bees" could be read by all with profit. The truth is often most forcibly taught in the guise of fiction. If all bee-keepers would work with the spirit and system I have endeavored to teach in the "Blessed Bees," I am sure they would have greater delight and greater profit in their calling.

Iowa City, Iowa, 28th Sept., 1880.

[The foregoing was contributed to the essay department of the North American Bee-Keepers' Convention, recently held in Cincinnati, but did not reach the Secretary in time to be read. There are so many valuable suggestions contained in it, that we publish it entire as correspondence.—ED.]

For the American Bee Journal.

Fertilization in Confinement.

LEVI FILBERT.

A year ago last August, I thought I would try an experiment. Having a queenless colony, I made a frame of the same material that I make frames for the hive, only larger, so that it would fit down tight all around. I then covered it with wire-cloth, and removed the first comb from the end of the queenless colony, placing in my wired frame. I then went to a hive and took out a queen cell, where the queen was just beginning to cut through; I took my pocket-knife and cut the queen out and placed her in the end of the hive, with a good portion of bees and drones. I left her there three days, when I changed her to the other end of the hive with other drones. In this way she became fertilized and proved to be a good layer, and she "holds the fort" to-day.

Now I do not wish to be misunderstood. I do not say this will always be a successful way, but it worked like a charm the first time I gave it a trial. I intended to give this another trial this season, but my bees did poorly, so I dropped it for the present. I wish some other bee-keeper would try this plan of fertilization.

I have united my bees from 74 down to 51 colonies. I put 2 and 3 together, along with all the young brood and honey, and removed the empty frames. This I think is the only safe way. I am not the only unlucky man here; if I lose my bees, others will lose theirs. Success to the BEE JOURNAL and all bee-keepers.

Port Byron, Ill., Sept. 29, 1880.

For the American Bee Journal.

Bee Pasturage and Other Items.

WM. CAMM.

EDITOR BEE JOURNAL: In my last you made me say "under feet," where I wrote tender feet. I meant that the two bad seasons would drive out many, or most beginners, who would become customers rather than producers, and the ultimate advantage would be to those who intelligently persevered in apiculture. I have saved seed of melilot and figwort; shall sow and cultivate the best honey plants side by side, and carefully note results.

Since writing you last I have observed bees, in the same flight, many times pass from purslane flowers to those of another weed closely resembling them in color and size. In one particular spot where I often watched, contrasting flowers were mixed, but I saw no crossing in the same flight except between buckwheat and smartweed, whose flowers, though differently shaped, were of nearly the same color. Here I saw almost every bee that visited the cluster cross, and saw them do so hundreds of times. Color, then, seems to guide the bee, and not only the bee but birds, for while making these observations I was one day painting farm implements with a bright red, some of the paint was spattered upon plants, and I saw a humming bird repeatedly stick his bill in the paint on different plants, and several times tried even the tongue of a reaping machine. The little fellow seemed surprised, and before giving it up alighted on the tongue in the fresh paint, so close to me that I tried to put my hand on it. Several parties were standing close by, and we were conversing with a good deal of animation, yet the bright color seemed to attract the bird more than our presence and noise overawed it.

Desiring last week to introduce eight Italian queens, I tried six of them by making a sweet infusion of peppermint leaves, removed the old queen, sprinkled the hive and bees with the infusion, also the new queen, then lifted a comb, put her on it, and after watching to see that the bees did not hurt her, put the comb in its place. Out of the six, five were successful. In looking for one black

queen I was bothered a long time, but finally saw her dead, killed by accident, in front of the hive. As the bees were annoyed by exposure to robbers, I put the new queen in a cage, and next morning another black but smaller queen laid in front of the hive.

A letter from the northern part of Alabama tells me that there bees use all the honey they get from white clover in brood-rearing; but gather a surplus of good honey from red clover. Two degrees south of this I saw hundreds of bees work on common red clover, but here not a single one. There few worked on blackberry; here many work upon it.

I removed a black queen; 24 hours afterwards I put one of Alley's queens in, caged; after 48 hours I released her, and, though well received, she flew away. As she seemed to mark the hive, my wife and I sat long by it without moving anything, but our bird was in the bush and for good.

Just where I live frost has killed all but the hardiest flowers, though the situation is high and dry; but where I have bought, 6 miles east, there is hardly a sign of frost, and even beans and tomatoes are green. This shows how careful one should be in selecting a location for an apiary.

I have just destroyed an old, gentle queen, caught wild in the Ozark Mountains in Missouri, that to my own knowledge has laid five seasons, and was still prolific, but this year bred a great number of drones. Her progeny were very gentle, very industrious, and nearly all showed one or two yellow bands.

Winchester, Ill., Oct. 4, 1880.

For the American Bee Journal.

Chaff Packing on Summer Stands.

SAMUEL STEVENSON, M. D.

On this, as on many other subjects, there is still a difference of opinion, which means that we have not yet reached perfection. Much has been said upon this interesting topic, yet I think there is no danger that we shall understand the subject too thoroughly.

I will give the method of wintering which I have pursued successfully for the last six years. I make a box of good, strong, inch lumber, with a bottom of the same thickness. The bottom is placed on the inside of the end and side pieces. I make an opening on the front side 1 inch wide by 2 long, on a level with the floor or bottom. I then remove the top from the hive and place the body containing the frames and bees within the box. I build so as to have a 3-inch space on all the sides, between the outside of the hive and the inside of the box. The box extends 5 inches above the top of the hive when placed in position. To secure entrance to and exit from the hive at all times when the bees are disposed to fly, I take a thin piece of board 3 inches wide by 6 long, and upon the same near the ends nail a piece of board 2 inches high by 3 wide. This is placed on the inside of the box, so as to cover the opening made there. The hive is then brought up snugly in contact with it. Here we have a little vestibule or porch completely enclosed, 2 inches high, 3 wide and about 5 long. This secures perfect freedom to the bees to pass in and out. The space between the hive and box is now completely filled with finely cut wheat straw and chaff—the dryer the better. The honey boards are now removed, and a piece of good, strong, thick, clean, woolen cloth (not anything that you can pick up here or there) is put down upon the frames and fastened at each corner with a small tack. This is then covered with from 3 to 5 inches of straw and chaff. By having the cloth thick, dust is prevented from passing down. The animal heat is effectually retained, while the moisture or perspiration, which is constantly generated, passes up through the cloth freely, and leaves the bees dry and warm. The whole is now covered by a roof, which shuts over the outside of the box and rests on a strip of wood nailed about 2 inches from the top of the box. I build the roof of boards and shingles, and allow spaces between the roof boards for the escape of moisture.

On the approach of winter, I place a quantity of straw around the hives, upon the ground, and push it up snugly against them. This prevents the cold wind from driving under them. Thus prepared, I leave my bees until the 1st of May, or sometimes till the 10th.

Put up in this way, bees are not apt to leave their home on the first warm day in winter, while those not thus protected, leave by hundreds and perish on the snow or by the cold wind. The warm rays of the sun do not easily penetrate the well-covered home and arouse them.

In the early spring months breeding goes prosperously on within the well-protected hive, indifferent to the sudden and often unfavorable changes peculiar to our spring season. Dryness and warmth seem to be secured by this method—without these conditions, no colony can prosper. By this method of wintering, I have succeeded for the past 6 years to my entire satisfaction.

Morenci, Mich., Oct. 12, 1880.

For the American Bee Journal.

Plenty of Bees: Plenty of Honey.

G. M. DOOLITTLE.

In order to get box honey we must have plenty of bees in our hives when the honey season arrives, or a failure is almost certain, as those reared as the season draws to a close will be consumers instead of producers. But how shall we get the bees? is a question frequently asked. We will tell you how to get them: When pollen becomes plenty—say, the 10th of May in this latitude—we go to each hive, and if the bees will bear spreading a little more without danger of chilling the brood, take a frame of honey from the outside of the cluster, and break the sealing by passing a knife flatwise over it, and place it in the center of the brood-nest. In ten days go over them again, and so on until settled warm weather comes in June, then go over them every four or five days, putting one frame in the center each time, and you will find the queen will fill it every 4 or 5 days, besides keeping all the empty cells filled which are daily vacated by maturing brood. By the 25th of June every available cell should be filled with brood, and the hive full of bees. By this time white clover is at its height, and all the boxes should be put on, if not already on. We like to put on boxes when the hive is so full of brood, and the bees so anxious for some place to put honey that they will commence work in the boxes at once.

Gallup gave us the secret years ago in the AMERICAN BEE JOURNAL, when he said: "Get the bees and they will get the honey, if there is any to be had." Keep an eye to business and do things at the right time, if you wish success. If we wait about putting on boxes when our bees have arrived at the condition we have supposed them to be in on June 25th, and we should have but a few days honey yield, we will get nothing. It is no unusual thing to secure from 6 to 10 lbs. of box honey from a colony per day, if you have your hive full of brood and bees and honey is plenty in the flowers.

Now we will suppose that instead of spreading the brood as given above, we let our bees take care of themselves, leaving weak colonies unprotected, and if any bees have died during the winter we leave their stores for the bees to carry away. After carrying off this they will be apt to rob out week colonies, and thus their combs will be filled with honey instead of brood. Soon the willows blossom, then the apple trees, and thus the hive is kept full of honey. Too much stores in May and June will just as surely spoil the colony for box honey as to let them starve. There is no such thing as having the combs full of honey during the fore part of the season, and then getting boxes filled with clover honey, for where would the bees come from to gather said honey?

E. Gallup said in the AMERICAN BEE JOURNAL, page 6, vol. 4: "We must never allow the bees to get in advance of the queen, for if we do the prosperity of the colony is checked at once; that is, if the bees are allowed to fill the combs with honey in the spring, before the queen has filled them with brood, the colony will be an unprofitable one." Honey cannot be obtained without bees. Our 9 Gallup frames give us 45,000 worker bees every 21 days, and a queen that is good for anything, worked on the plan given in this article, will keep the frames full of brood after they are once full, till the honey season draws to a close, providing the boxes are put on at the proper time; but give the same queen 5,000 bees, and these old ones or field-workers, and they will keep the combs so filled with honey that no surplus will be obtained. If our hives contain 5,000 bees on the 1st of May, with 10 lbs. of honey, they are what we call extra good colonies. Now, if we should give them what honey or syrup they could carry during the month of May, instead of using up the 10 lbs., we would have about 5,000 bees in our hives all summer. Thus it will be seen it is bees we want in our hives the fore part of the season, instead of honey.

If, by the process given, our bees run short of stores, of course we must feed them, and money thus spent in feeding will return a large interest, if the season is anything like favorable.

When boxes are filled take them off before they are soiled, and put empty boxes having a starter of nice white comb in their places, and thus you will avoid the difficulty so often experienced, of getting bees to work in a second set of boxes after a full set has been taken off. As the season draws to a close, place the unfinished sections together, and as near the brood as possible, contracting the amount of box room to suit their number, and thus you will get most of your honey in a salable form.

Again another season draws to a close, and this is the last one of the articles we promised you for the season 1880. We hope they may have been of some practical value to some, and if so, we are content. We rejoice that we are to have a weekly AMERICAN BEE JOURNAL for 1881, and we shall try to show our appreciation by writing for its col-

umns as often as our time will allow. Wishing you all a prosperous season for 1881, we remain your obedient servant.

Borodino, N. Y., Nov., 1881.

For the American Bee Journal.

Tool for Glassing Sections.

C. WURSTER.

EDITOR BEE JOURNAL: I have sent you an implement for inspection and opinion. I have felt the need so much for it during the past two years, and have tried several devices to help me in putting the tin points on sections in glassing, of which, as you see, this is the result, and I do not think it can be improved much in principle, except that the hole for the shank, which is smaller in diameter down through the interior of the jaw, may be extended about ¼ of an inch further back, so on the spring pressing back the shank it may still have sufficient insertion in its own bore to prevent the point of the shank from slipping over on the shoulder left by the

larger bore. One continuous small bore may do, but the shank would not be sufficiently strong and stiff, and the large bore would be too big to go to the tip of the jaw unless made heavier, also the slat in the exterior cut in the furl or casing might be put on the opposite side to prevent coming in contact with the right fore finger in the act of pressing down when driving the tin points. It is a great convenience for those who have many sections to glass.

I have come across nothing so far to do this work. I have spent much study and labor on this, and whether it suits or not, you are welcome to it, and to use it for a pattern. It is not easy to make one to work right, but a good mechanic, with a reasonable amount of skill, ought to be able to do so without difficulty. We have had engravings in your valuable JOURNAL for nailing sections to advantage, but I consider this just as indispensable. You can drive the point into hard wood even. Although only lately perfected, I still had the pleasure of driving some 7,000 points, without missing or ill-spending a single one.

You will see, when using the tool, the section must be laid down flat, lay your glass on, and the side of the section you wish to drive the points in should be nearest you, then with your left hand hold the section and glass in place, and with the left hand thumb to steady the tool, having, as you will notice, one jaw shorter, which must be facing the glass in front of it, keeping the tool close to the edge of the glass, and while pressing down with the left fore finger press the glass against the tool, or at least from pushing it off in case a point is a little faulty and sometimes apt to bend.

A very little practice will enable a person to put in the points, and with the side of the jaw turning over the heel of the point with such rapidity that a looker-on can hardly tell how it is done. I of course have taken out no patent on it, and therefore make it public property with this wish, that it may be named with the inventor's name if it should be found deserving. The shank is put into the handle with a thread cut on it and screwed in, as that part is to be the strongest, and to project just so so far, to almost a hair's breadth.

Kleinburg, Ontario, Oct. 5, 1880.

[The tool is very handy, and shows skill in devising. Those who do much glassing will find it quite useful.—ED.]

For the American Bee Journal.

Cyprian and Holy Bees, Etc.

D. A. JONES.

In compliance with the request of the National Convention that I write out for publication, in the AMERICAN BEE JOURNAL, the substance of my remarks before that body at their last session, in Cincinnati, relative to my recent trip to the Island of Cyprus and Jerusalem, it gives me pleasure to submit the following:

Since we last parted (about one year ago) I have endeavored, in common with the rest of my brother bee-keepers, to elevate the science and better our condition, and one of my efforts has been to secure new and superior races of bees, in which I have succeeded beyond my most sanguine expectations, and I feel satisfied that the years 1880-81 will be marked in the bee history of America as making greater onward strides in bee-keeping than any previous years.

One year ago we were very anxious to secure queen bees from the Island of Cyprus, which I have accomplished at great expense and sacrifice of comfort; but even more has been done. A superior race of bees, now known as "holy bees," have been collected from various parts of the Holy Land. I found bees there which I believe to be those first given to man, and which possess qualities not found in any others.

The Cyprian bees have been described in the JOURNAL, and as I have now furnished a great many of our American bee-keepers with Cyprian and holy queens, it will only be necessary to call attention to some of their leading points:

They build less drone comb than the blacks or Italians.

They fly further in search of stores, if necessary.

They fly very swift, being able to go as far, and unload and return, in 7 minutes as others do in 9.

They protect their stores against robbers with such determination that they often catch the robbers on the wing around their hives and punish them before they even get time to alight; in fact, they appear robber-proof.

They are more judicious about going out in bad weather, and have a keener scent, which is more acute than blacks or Italians.

Their bodies are more telescopic, which enables them to carry large loads of honey, and to contract their bodies at other times to quite small proportions.

They are wonderfully prolific, laying an incredible number of eggs in a season; in fact, I would not be surprised if holy queens would lay as many eggs in one season as blacks or Italians do in a life-time.

They do not stop breeding early in the fall after frosty nights, like blacks and Italians, but continue breeding right along; thus it will be seen that they will be in good condition for wintering, so far as young bees are concerned.

Both races have a beautiful gold shield between their wings, and are very light on the under side of the abdomen. The Cyprians have a black tip at the end of the abdomen, more so than the holy bees; some of them having beautiful gray hairy rings even to the tip, and when well filled with honey they sometimes show 4 broad gold bands and 2 narrower ones—6 in all.

Some of the Cyprian drones are very handsome, more so than the holy drones; yet the holy drones are very fine, large and vigorous, with long gray and blue-tinged hair. Both Cyprian and holy bees are more easily transported than Italian or blacks, as they do not gorge themselves with honey so frequently or readily, and can contract their bodies so small; may it not be reasonable to suppose that they consume less stores, except in breeding? I intend to test this matter fully, and wish others to do so. I believe they will be valuable for box honey, as the queen will occupy every cell in the brood chamber, and force them to put their honey elsewhere.

Both the Cyprian and holy queens are very much smaller when not laying, and some persons think them ordinary-looking; but give them plenty of bees and room, and they get very large and fill frames with eggs so rapidly that you would imagine it impossible for one queen to deposit them so fast. One holy queen can lay eggs enough in 21 days to make from 4 to 6 swarms of bees, if they are all cared for and hatched. This may seem surprising, but try the experiment and be convinced.

How Bees are Kept in Cyprus.

They are kept in clay cylinders, which are piled up like cord-wood, the ends being closed up with stone or mud, and the spaces between the cylinders as they are piled are also closed at each end, so there is a dead-air-space almost around each cylinder, which keeps them cooler than any one would suppose they could be, standing as they do in the burning sun. As the bees all fly out at a small hole in the end of each hive, I should think that heavy losses must occur with the queens as they go out on their bridal tours.

When the natives want any honey and think the cylinder is full, they open the rear end and remove the stone or mud plate that closes it, and blow in smoke to drive the bees forward, sometimes out of the entrance, and remove all the honey from the back end of the hive. Sometimes they have two honey seasons, other times one, but this year none. It has been the worst honey year ever known in Cyprus. Three-fourths of the bees died last spring, and since then three-fourths of what were left have died, so there are none in some localities, and only a few in others. We have had to feed an enormous quantity of sugar to keep our large apiary at Lanarca from starving.

Mr. Benton says that our Italians or blacks could not survive where the Cyprians will live and thrive. He wonders that there is a bee left in such a country, and claims that they are only the fittest which have survived. Mr. Benton is very sanguine about their great superiority when it is put to the test.

But I must now tell you about the holy bees, or the bees of Palestine and Syria. In the Valley of Sharon, at Jerusalem, Bethlehem, Mount of Olives near Jericho, and in fact, all through the hills of Judea, the hives are made of clay, and conical-shaped. The bees fly out and in at the small end, the other being closed the same as in Cyprus. About Beyrout, and along the edge of Mount Lebanon, they are kept in water jugs, some in cylinders, and others in a wicker or basket hive, about 7 or 9 inches

in diameter, and about 3 feet long, covered with the manure of camels or mules. They are also laid on the side, and the ends closed, except a small hole in one end for the bees to pass in and out. At Damascus they are in clay cylinders not burned nor baked, but dried with a mixture of straw to hold the clay together. On Mount Hermon they are the same as the above, but near Palmyra they are smaller, and the bees are very handsome, some of which were shown at the Convention. In other parts I found the hives similar to those I have described. But the strangest one I found was a rock hive, or rather a colony in a deep crevice in the rocks, near the Jordan. I examined it to see if I could not get them out, but came to the conclusion it would take a barrel of gunpowder to blast away the rocks so I could get to them. I was informed they would not have been there then if they could have been reached, as the shepherds are always on the search for wild bees, and they rob them as soon as they find them.

There is one redeeming feature about the system of bee-keeping practiced in Cyprus, Palestine and Syria; that is, although they are heathens, they do not brimstone their bees as do the Christians of Europe and America.

Beeton, Ontario, October, 1880.

For the American Bee Journal.

Bee-Keeping in the South.

B. F. AVERILL.

Having kept bees with profit at my home in Massachusetts, I have often, since coming South, wondered why so few people here are engaged in that pleasant and profitable occupation. I regard an apiary located in the South, if managed with equal energy and skill, more profitable than those I have visited in other sections of the country. Here are flowers in abundance (except perhaps a few weeks in July and August) from February to November, and during the winter months, in mild weather, bees gather quantities of juice from stubs of cane in the cane-fields, breeding, therefore, throughout the year.

I find with regret, in a country so well adapted to bee-keeping, the pursuit sadly neglected. A walk through several apiaries in this vicinity discouraged me of the bee prospects for Louisiana. But a number of apiarists in this State are doing much to advance the business in the South by their example and success, prominent among whom I may mention Mr. Paul L. Viallon, of Bayou Goula, who has an extensive apiary. A glance at his many colonies and nuclei, overflowing with bees, would induce, I think, many of my Northern friends to wish they were as favorably situated. While my bees at home had ceased breeding, and were ready for the cellar when I left, his are gathering honey, and will do so for weeks to come.

October 11, 1880.

For the American Bee Journal.

Do Queens lay Eggs in Queen Cells?

D. K. BOUTELLE.

Mr. G. M. Doolittle in an article on the "proper time for queen-rearing," in the JOURNAL for October, says: "Certainly no better queens can be reared than those reared in the swarming hive, where the queen lays the egg directly in the queen-cell, and the larvæ is fed for a queen until it is sealed over."

I will give an account of a little experience I had two years ago, which, if I mistake not, may have a bearing on the question whether the queen lays eggs directly in the queen-cells, or whether they are transferred there by the worker bees from worker cells. In 1868 I had a few hives of black bees which I desired to Italianize. From one of them I took the queen, closing the hive for a few days for all eggs and larvæ to be too far advanced for producing queens. I then cut out all queen cells started, so there was no possibility of a queen being reared from any thing then in the hive. Next I gave a comb from an Italian colony containing a small patch of eggs equal to about 3 inches square, but no brood. On the second day afterwards I opened the hive and took up that comb. To my surprise, no queen-cells were started on it, but the eggs were there, apparently as when I gave the comb. I closed the hive for two more days when I looked again, and was again surprised, on taking up the comb, to find no eggs in it—not an egg. This puzzled me. I took up the next comb, but nothing peculiar was seen. I then took up a third which was a new, light-colored comb (the one supplied was an old black comb) and was built only about half way down, and, as is often the case in a long, or Langstroth frame, it was built in two points—or forked. Here, for a third surprise, in the fork between the points, were two good queen-cells, built about two-thirds length. On looking into them there I saw the tiny larvæ lying in bits of white jelly all nice. But my surprises were not yet over. While

puzzling over the matter, I noticed that one of the points of this comb was composed of drone cells, and which were also occupied with just hatched young larvæ and bits of jelly apparently just like those in the queen-cells. Here was a puzzle sure. I closed the hive and watched it closely, examining it nearly every day, until it was nearly time for the queens to emerge, when I cut one of the cells out and gave it to a another hive of black bees from which I had previously taken the queen. Both queens from these two cells proved to be good Italians. In due time, from the drone portion of the comb, occupied with brood, hatched nice Italian drones. The number of drone cells occupied was apparently about the same as the eggs in the comb I had supplied from the Italian colony.

If I remember rightly, some three or four years ago, some one offered, through either the BEE JOURNAL or *Magazine*, to give $50 to any one who would prove that the bees ever removed an egg from a worker to a queen-cell. Now, if I have made no mistake about the facts, as herein related, then the conclusion seems inevitable, that the bees do, at least sometimes, remove eggs, not only from worker to queen-cells, but also from worker to drone cells. It would seem too, that the eggs which the queen deposits in worker cells are capable of producing both queens and drones! It would further seem that no great number of eggs or larvæ could have been fed to these two queens. If these conclusions be true, then what becomes of the theory that drones are produced only from eggs not impregnated with the male principle? I do not dare, at present, directly to advocate what would, from the above seem to be true, against the theories of experienced and learned apiculturists. But, here is my experience for what it is worth, and I confess to some few pinches of doubt about a number of things pertaining to bees, which are pretty generally taken for granted after reading them in a bee book or paper.

But to return to the question whether queens deposit eggs directly in queen-cells. I am fully convinced that the bees *do* in some cases at least, remove eggs from worker to queen-cells. And now, the question I would ask is, do queens *ever* deposit eggs directly in queen-cells? I remember sometime to have seen an article—I think it was in the JOURNAL—in which the writer maintains that the matter of rearing queens and swarming is entirely controlled by the worker bees; and, that the queen is naturally opposed to the whole arrangement; and that whatever she does about it is by compulsion. Here is one thought about it. I have noticed that a very common, and it would seem a favorite location in the hive for bees to build queen-cells is the very bottom edge of the combs, where it is rare to see any worker-brood. I have often seen them in the lower back corner of the outermost side frames, a situation in which I never saw any worker-brood. Now is it not probable that the worker bees have brought eggs from other parts of the hive and deposited them in these situations? And further, is it not possible that the workers transfer *all* eggs that occupy queen-cells? Has any one ever seen a queen deposit an egg in a queen-cell, or otherwise verified the fact that she does so? or is it only taken for granted? If any one knows the fact, will he or she tell us through the JOURNAL how they know it?

Lake City, Minn., Oct. 15, 1880.

For the American Bee Journal.

A Visit to Mr. Hill's Apiary.

DR. E. PARMLY.

After the adjournment of the Convention a number of us accepted an invitation from Mr. J. S. Hill to visit his apiary, at Mt. Healthy, 9 miles from Cincinnati, O. I wish, Mr. Editor, you were with us. I heard many inquiries for you but you had vanished. We had a most enjoyable time; a perfect autumn day and, once beyond the limits of the city, a clear sky. You wou d be pleased to know all the occupants of the several wagons so kindly provided by Mr. C. F. Muth. Among other things we discussed was by what strategy our worthy president, Dr. Allen, managed to get all the ladies in his wagon, and we argued that equally skilful management of all the best things in which we are interested, would make our North American Bee-Keepers' Society a grand success under his administration.

Miss Delia Benton, who was in attendance at the National Convention, is a sister of Mr. Frank Benton now on the Island of Cyprus. His labors in the interests of bee-culture are too well-known to remark upon them here. Miss Benton's principal object in attending the Convention was to send her brother the earliest news of its proceedings and she must have been gratified to hear from so many, of the high esteem in which he is held by the most prominent bee-keepers, both here and abroad.

After dinner we examined Mr. Hill's apiary and had a pleasant meeting. Dr. N. P. Allen in the chair. On motion of Mr. D. A. Jones, seconded by Capt. W. F. Williams, it was resolved that we tender our thanks to Mr. J. S. Hill and his family, for their kind-hearted hospitality in furnishing us a sumptuous dinner and his kindness in exhibiting to us his apiary and his fine Italian and Cyprian queens, also our thanks to Mr. C. F. Muth for his kindness in exhibiting to us his house apiary and bees, and his kindness in procuring for us vehicles for our trip.

Mr. Muth is a large-hearted man; systematic in the management of his business and I am not surprised at the unbounded confidence I so frequently heard expressed, in his judgment and integrity.

The persons who were seated at Mr. Hill's table in addition to his family, represented about 3,000 colonies—Mr. Jones heading the list. In our examination of the apiary Miss Hill rendered valuable assistance to her father in opening the hives in advance. She showed that skill and gentleness of action that comes from experience and although unprotected, showed no fear and was not stung. When asked if she liked such work, she replied, that she liked to do anything to assist her father. If more sons and daughters were like minded, there would be more happy homes. She has intelligence, independence and firmness enough to make a strong character, and whatever she does, it will be done as Sir Joshua Reynolds mixed his colors, "with brains, sir."

New York.

For the American Bee Journal.

Hard-wood Barrels for Honey.

EDWIN FRANCE.

I have had some experience with oak honey barrels. It is needless to detail all my trials and troubles with "leaky" barrels, the first year, after I obtained an extractor, but I will say that oak barrels will hold honey without leaking, if they are well made, of good timber, and thoroughly dried before putting the honey into them. The barrels should be kept up stairs, two months or a year before using them—by all means keep them out of the cellar.

I use oak barrels without waxing and they do not leak at all, and the most of them have been in use from 3 to 4 years, and every year I have to take out one of the heads to get the honey out, after it is candied. I sell most of my honey in our home market. Am selling now at 12½c. per pound or 10c. by the barrel.

Platteville, Wis., Oct. 12, 1880.

[Hard wood barrels as usually made and kept in damp places, will not hold honey without waxing. Small sugar-pine or spruce barrels are far preferable to hard-wood, for honey; besides, your success with hard-wood is certainly exceptional. We recently saw a lot of 7 tons of honey, and all the barrels leaked but 3. For our opinion of honey casks, see October number, page 472.—ED.]

For the American Bee Journal.

Honey and Apiarian Supplies at Fairs.

L. H. PAMMEL, JR.

Many counties in the United States hold an annual fair, where there is a general display of agricultural products, farm inplements, stock, fruit, honey and apiarian supplies. Some departments are well represented, but that of honey and fruit is generally meager. So deficient were they in the former, at the numerous fairs which I have visited, that I questioned myself as to the cause, not thinking, however, that it was from a lack of interest. I further considered the matter, and through inquiry I find it to be actually from a lack of interest; and still another cause is that many bee-keepers hold fast to their old theories and think very little of scientific bee-culture, and I am sorry to say that a large proportion are such—of course there are many exceptions. Something must be done to enlighten such bee-keepers. But how shall it be done? is a question of great importance. Bee-keeping as a science has been developed to only a limited extent, for many new theories will be adopted that will add to the store of human knowledge.

Every bee-keeper should take pride in advancing the cause of scientinc bee-keeping, and no place affords such ample opportunity as our State and county fairs, for the less advanced class generally attend the fairs, and if the advantage is shown to them of having bees in movable-frame hives, or show them your honey, how elegant it looks, and others passing by will praise it; then contrast the difference with an old box hive, or surplus gathered in cheese-boxes and tobacco-pails. They will very soon be converted from their old hobbies to the more modern principles.

LaCrosse, Wis., Oct. 1, 1880.

Conventions.

Cortland Union, N. Y., Convention.

The Cortland Union Bee-Keepers' Association held its regular fall meeting in Cortland, N. Y., on Monday, Oct. 5, 1880. The morning session, after the reading of the minutes of the last meeting and the Treasurer's report, was devoted to miscellaneous discussion.

M. C. Bean inquired whether black or Italian queens were more prolific layers during life-time?

He was replied to by H. D. Mason, who claimed that the Italians were far superior, that they were more able to build themselves up when weak, would cover more comb with a given number, were greater honey gatherers, and required attention that they did not crowd the brood chamber. Some discussion of the relative merits of queens reared in nucleus and full colonies, and dollar queens in general, was participated in by Messrs. R. H. Mellen, E. B. Glazier and Pres. Pierce.

At the opening of the afternoon session, in the absence of M. H. Fairbanks, who was to open the principal question of the day, "The best method of preparing bees for winter," and E. H. Knapp, alternate, desiring to be excused, M. C. Bean was called upon to lead off the discussion. He stated that from lack of preparation he would simply give the plan he had pursued up to the present time. Since basswood time he had fed back considerable honey extracted for the purpose, and the hives were now full of bees and seemed strong for winter. The majority of his bees were in double-walled hives, packed in chaff and hay. The bees are on 8 and 9 frames. He always fed good honey, without diluting.

A. L. Lansing had fed natural honey and his success in fall feeding had been poor. The larger portion of the bees so fed had died before spring.

Mr. Mellen—It should he diluted.

Mr. Corey had fed diluted honey, and his bees had died with dysentery before spring.

Pres. Pierce—Bees not fed so late but that they could have one or two cleansing flights before winter, would be all right.

Mr. Chapman was feeding 5 colonies now as an experiment.

Mr. Mason's experience was that the honey fed late in the season would not be sealed, but soured, and the bees died of dysentery. Except for daily use, he would not feed later than the early part of September. In wintering bees Mr. Mason had tried many plans. He had once packed in chaff and sawdust. The plan he liked best and now practiced was to remove one end of the hive—the Langstroth, with one end secured by buttons—and placing it on that end on scantling arranged in a trench in dry soil. The hives were placed closely together, covered with an abundance of straw and a few inches of earth. He gave no ventilation except such as came through the soil; the bees consumed little honey, and came out strong in the spring. Last spring his bees dwindled away badly; attributed it largely to the cider they had stored in their hives in the fall. Some colonies wintered outdoors fared worse than those which he buried.

W. L. Cogshall wintered his bees packed in chaff; had tried a bee-house, but failed.

A discussion ensued upon the ventilation of hives, which was participated in by Messrs. Chapman, Mason, Cogshall, E. H. Knapp and F. Schermerhorn. The latter gentleman wintered in the cellar, and followed the directions laid down in the "New Quinby" as closely as possible. His success had been good.

Mr. Mellen had formerly tried the cellar, but failed; had used chaff hives for two years.

Slips of paper were given to the members, with the request that each give the amount of honey produced the last season, both comb and extracted, with the number of colonies in the spring and the increase. From these it appears that the total production by the Association is 10,215 lbs. extracted, and 9,160 lbs. of comb honey; number of colonies in the spring was 688, and now is 1,051.

It was decided that there be several subjects for discussion at the next meeting, instead of one.

The questions selected, together with the gentlemen to open them and their respective order, are as follows: "Foundation in hives and surplus boxes," W. L. Cogshall; "Wintering Bees," A. G. Chapman; "Rearing Italian Queens," E. H. Knapp and J. W. Cudworth; "Safest manner of Introducing Italian Queens at any time of season," H. D. Mason; "Springing Bees," R. H. Mellen.

The Association adjourned to meet at the same place on Tuesday, Jan. 4, 1881, at which meeting the election of officers for the year will occur.

The attendance was excellent, and included several ladies.

C. A. PIERCE, *Pres.*
C. M. BEAN, *Sec.*

Read before the LaCrosse Convention.

About Wintering Bees.

E. A. MORGAN.

This is a subject of more importance to the apiarist than all others combined, and well deserves the earnest thought, careful study, and accurate experiments of the most practical apiarists. If we have no bees, we need not trouble ourselves about their style of hive, their forage, or their management; and we are absolutely certain we shall lose them unless properly cared for. Although a heavy loser myself by disastrous wintering, I have conducted a series of experiments which I feel sure will prove a gain in the end.

Bees, unlike other insects, are more or less active all through the winter, and require more or less food, according to the amount of heat they generate; therefore, to successfully winter them they must have an even temperature, and to secure this cellars, bee-houses, and packing on the summer stand are resorted to.

I have traced the trouble to sudden changes of temperature, causing excessive dampness, unwholesome food, and failure in late fall breeding.

I am satisfied that bees in this latitude cannot be wintered successfully in cellars; the five months' confinement either bloats them up, causing disease, or they besmear the combs, and the foul odor soon destroys the colony, or renders them so weak that they dwindle in the spring. Some advise putting them out for a fly; but the disturbance in doing this makes it equal to leaving them in, and results in no good; besides, it is a heavy job with a large number.

As we have seen that an even temperature is desired to keep the bees quiet, and as the foul odors of cellars and bee-houses causes disease, we must search for other means of protection. After three years of careful experiments, I am satisfied that wintering on the summer stand is preferable to any other, and that bees are in a better condition for the season's work, than if kept in any other way. But to get our bees through safely with a small amount of honey, and have them strong in numbers and in a healthy condition, they must be prepared in the fall; for the better condition they are in when put away, the better they will come out in the spring.

First in importance is the queen; more depends upon the queen than is generally supposed. The hives should be examined as early in the fall as the first of September, to see that all have queens, and that those which are old and feeble may be superseded, and those not laying be fed or the honey extracted from the center combs. A good bee-keeper will know the age of every queen, and note the condition of the colony. I am certain that no colony will live until May without a queen, let them be in ever so good a condition.

It is very important that the queens be kept laying until October 1st; at least that there may be young bees to winter on, instead of old ones, for the work required in spring to rear brood is too much for old bees, which are tired out at the beginning of the winter. With this method we have young bees and the colony is strong in numbers, both tending to the desired point—heat and even temperature. Very much is lost by keeping old or poor queens. Introducing a young, vigorous queen in August will generally save the poorest colony.

After the queens and late breeding have been attended to, I prepare my colonies as follows: On a warm day in October remove 3 or 4 frames of honey from the hive (choose the lightest), and leave the balance in the center of the hive; then put a division board on each side and pack the space with dry chaff; cover the top with duck, put on the upper story, fill in with chaff, and put on the cover. I then construct an outer rough box, with 6 inches of space all around, which I fill with chaff; then cover with coarse marsh hay, and rider it; leave the hive just where it stood all summer; contract the entrance to about 2 inches. Thus packed, strong in numbers, with plenty of good, sealed honey, the heat is retained, the moisture escapes without the heat being lost, during a protracted cold spell leave the entrance nearly closed, and at the beginning of a thaw open the entrance full width to allow the dampness and the gases to escape at the bottom.

A colony of bees in a cellar, with the temperature at the freezing point all the time, are worse off than out on the summer stand, unpacked. Each colony should have at least 30 lbs. of good sealed honey, and two small sticks should be laid across the tops of the frames before covering with the duck and chaff.

If warm days occur in mid-winter, scatter straw in front of the hives; some old bees will fall and die, but the colony is not weakened, for during such a flight the queen is excited to lay, and young bees are reared even in January and February, and very many in March. Several colonies taken from the cellar on April 1st, 1880, seemed strong, but in

3 days did not cover 2 frames, while those wintered out, as above described, were strong and healthy, and emitted a sweet odor; they did not dwindle, and gave the best returns this season of any bees I ever knew.

Some have success with cellar wintering, but I find bees wintered out are stronger, tougher, and breed up earlier than those wintered in-doors. It is said that bees kept in cellars, in a healthy condition, void their feces in a perfectly dry state; but the conditions under which they must be kept are so particular, that with the majority it is not safe.

Prof. Cook would leave his bees in the cellar until flowers appear; this may do in countries where winters are short, but in Wisconsin I have lost several good colonies which were very quiet from Nov. 1st until April 10th, by leaving them until flowers appeared, April 18th, when all were dead.

I consider that no upward ventilation is necessary, for impure air caused by exhalation of the bees will escape at the bottom; being carbonic acid gas, it is heavier than air. Do not molest or jar hives in cold weather, as this disturbs the cluster, causing them to eat, and any excitement produces an undue heat, which rises in moisture and must be taken up. During sevcral weeks of protracted cold, frost will collect on the outer combs if not covered with bees, and when a thaw comes, if the entrance be not opened wide, this dampness will kill the bees. It is my belief that in cellar wintering brood-rearing kills the bees. I shall, therefore, continue experiments the coming winter, giving pure honey sealed in June in the upper story, with not a particle of pollen in it. Whatever may be the result, I will report it for the benefit of science.

Arcadia, Wis., Sept., 1880.

Read at the LaCrosse Convention.

Bee Forage of Western Wisconsin.

L. H. PAMMEL, JR.

A man's success in bee-keeping may be traced to the scientific management of the apiary, and the number of honey plants that are in easy reach of the bees from the apiary. Every locality contains some honey plants. The fertility and productiveness of these plants depend upon the soil and climate. Of course our soil and climate cannot show honey plants that grow so luxuriantly and blossom with such fertility as those of the more tropical regions. Many of the southern plants thrive here, but their blooming season is retarded by our late springs.

The willow is with us the first plant of the season that contains any pollen or honey. The blossoms of the willow are of two kinds—pistillate and staminate; the former contains only honey, and the latter only pollen. The red or soft maple is a valuable honey plant, blooming long before its leaves appear. In April many wild flowers bloom, that contain both honey and pollen; these are nearly all members of the crowfoot family. Early in May the hard maple opens its buds, and is very productive in honey. We can hardly classify it among the honey plants of this region, for the tree is very scarce in our forests. About the 15th of May the apple, cherry and wild plum blossom. They contain considerable nectar of fine flavor, and are thronged with bees from the first opening bud till the last. About the same time the dandelion opens its beautiful yellow tints, and where it is found the busy bee may be seen. One of the best honey plants of May is the wild crabapple, the honey being of the finest flavor, and, from a careful observation, I am satisfied that the blossom contains as much honey as the basswood. So fragrant are the flowers of the crabapple, that the air is scented for a great distance. As a honey plant, I would advise its cultivation. There are many wild flowers that bloom in May that are frequently visited by bees, but time and space will not permit me to name them.

The honey plants of June are more abundant. The white or Dutch clover opens its deep hidden tubes early in June, and is in continual bloom for about six weeks. It is well adapted to the soil of Western Wisconsin, very little having ever been sown; it is at home alike on the alluvial bottom land or on the poorest clay soil. The sumac is a valuable honey plant. The bees can gather honey from it as long as the dew remains on its blossoms. Borage is one of the cultivated honey plants, and is very valuable for the reason that bees work on it in rainy weather, when nearly all other plants have no honey it blooms from June till frost. Alder berry, like sumac, only has honey early in the morning, and the honey is not of the finest quality. Horehound (Salvia officinalis), is one of the mint family. This is one of the few wiid honey plants which have a commercial value. The honey is very fine, but retains slightly the taste of the plant.

Early in July the basswood opens its first buds; and blossoms continuously for two weeks. The appearance and flavor of the honey certainly cannot be surpassed. The basswood, so greatly admired by the ancients, will still con-

tinue to win the admiration of all ardent lovers of nature. Indian and sweet corn contain considerable pollen, and the latter some honey, which is very thin and of poor flavor. I cannot say with certainty that bees gather honey from Indian corn, but think they do. Catnip is rich in honey, and blooms from July till frost. Very little of the plant is grown for honey, as it is a weed which is hard to destroy.

In August the cultivated buckwheat blossoms, if sown from the 20th of June to the 1st of July. The honey from buckwheat is very dark, and is of an inferior quality; the flowers are rich with nectar. About the 15th of August the bergamot opens its beautiful yellow corollas, ready to let the bee sip its nectar. Bergamot is only adapted to sandy soil. Goldenrod, belonging to the Solidagoes, is one of the latest honey plants of the season, and can be found growing on all soils—in the marshes, on the prairies, and on the uplands. The honey is of fine quality, and in flavor cannot be excelled. The asters bloom about the same time, and are found growing more abundantly in the marshes and along the water-courses.

This makes up the list of most of the honey plants of Western Wisconsin that I am most familiar with. Not being an expert in botany, I presume errors have been made in this essay; but it was not my object to give you the botanical names and descriptions, but merely a simple description of the honey plants, that beginners may be guided.

LaCrosse, Wis., Sept., 1880.

Western Illinois and Eastern Iowa.

Various adverse circumstances, which were unavoidable, tended to make our eighth semi-annual meeting a very light one, among which are prominent the universal failure of the honey crop this year, the great political campaign being so near its close, and many members who would have been present, but, at the last hour almost, were detained at home by other pressing business. Nevertheless, those who were at New Boston on the 14th and 15th of October, 1880, enjoyed themselves very much, and the discussions, though limited as to debaters, were as animated as of yore. Several essays were read which drew out lively discussions.

The meeting was called to order by the President, L. H. Scudder, who is ever prompt and at his post. Letters were received from many of the members regretting their inability to be present and wishing the meeting all success.

The first question very naturally taken up was

Why the Small Crop of Honey this Year?

All seemed willing to give a theory, but no satisfactory conclusions were reached, except it be in the mind of each individual.

Jas. A. Simpson. I would like to see that question answered. It is the first time in my experience when all things were favorable; it seemed as though every condition was right for the secretion of honey, and yet no honey flowed. I always thought that when plants blossomed and produced seed, we ought to get honey from them. But this season was an exception; bees were starving in our hives when white clover was in bloom. I saw a bee go to 67 heads of white clover, and yet she had no load. The heads were short, but the bees accumulated nothing.

E. D. Godfrey. I think the bees were about as much disgusted as you

Jas. A. Simpson. They seemed so.

D. D. Palmer. The last two seasons were very short crops; this year we get none. From our 201 colonies I only obtained 10 lbs. Some others report large crops.

E. D. Godfrey. Messrs. Dadant write me they hauled 115 colonies to the river bottoms to get 25 lbs. average to the colony. The only reason why they did not get 10,000 lbs. was they did not go soon enough. I rather attribute our failure to get honey in the fall to wet weather; it was very warm, and the rain washed all the honey from the flowers; I obtained 110 sections of comb honey, but had 1,000 lbs. of extracted from 25 colonies.

Jas. A. Simpson. I have heard it said many times by wise men, who thought they knew it all at least, that when honey-dews were prevalent, we can look for no honey from flowers.

E. D. Godfrey. I must say I am very much puzzled over this subject.

L. H. Scudder. Yes, it is so all over the country; there seemed to be no honey in any of the flowers. Some years ago I obtained 200 or 300 lbs. of honey-dew honey; I sent it to Chicago, expecting, of course, slow sale for it, but the result was I obtained 25c. per lb. for it. That was 8 or 9 years ago, and right following it we had a good yield in the fall. I take one or two old-liners and put 6-lb. boxes on them, and sections on others, to see if there is any difference in the using; it looks as though the separators keep the bees out of the boxes; have had some colonies fill several cases full of sections when none was put in the 6-lb. boxes. So it

shows that the blame of no honey is not in the separators.

D. D. Palmer. I will give my theory, but may change my mind next year. There are many conditions needed to the secretion of honey. All are aware that a warm, wet atmosphere is very favorable to the production of honey. For my part, I want one condition above all others, and that is warm nights. Just look back over this season, and also last year; we had many hot days, but very few hot nights. Year before last we had hot nights, and we obtained a good yield of honey. No matter if we do have warm days, if the nights are cold we get but little honey, for what is secreted in the day time is evaporated by the sun about as fast as it comes; while it does not evaporate at all at night, and the bees get it early in the forenoon.

L. H. Scudder. The reports this year show that nearly all of the honey has been obtained from basswood or linden.

Jas. A. Simpson. I have seen honey secreted when the nights were quite cool, and when warm nights came no honey followed. It must be something else; we have other crops in abundance.

D. D. Palmer. Yes; we had warm nights and bees obtained honey. They showed it by roaring the next night, but as soon as cool nights came they quit roaring.

L. H. Scudder. I have long believed that such was the case; but whole sections of country South, and in the great honey regions of California, have cold nights, yet I have always felt we must have warm nights for honey. I have had a good run of honey after the first frost came.

Jas. A. Simpson. We all know that when the ground is wet we have a more uniform temperature day and night; then we may expect vegetation to grow best; the change is much quicker at night in very dry weather; I think the ground when wet and hot is in the best condition for honey.

D. D. Palmer. The coast of California has been spoken of. There are no bee-keepers in Oregon and Washington Territory; there is no honey there. I think they must have warm nights to get honey in California, if looked at closely.

L. H. Scudder. In Southern California they lay their short crop of honey, and other crops, to the drouth.

Jas. A. Simpson. Does white clover raised from seed, yield honey the first year? There is a large extent of country covered with white clover near me. Old clover gave us no honey. Many thought clover did not yield honey the first year.

Is it best to put on Separators at first?

L. H. Scudder. At first, by all means. It is just as well to put them on then, and saves a great deal of work and trouble. This was concurred in by several members present.

Some discussion was had in regard to bees having enough to carry them through the coming winter. From reports given, it was thought those on the river bottoms would have an abundance; but back of a line 3 or 4 miles from the river, bees would have to be fed, and much loss is expected. Many old queens will be kept over that in a good season would have been superseded.

Comb Foundation.

Jas. A. Simpson. I believe there is too much purifying of the wax in comb foundation; they try to get it too pure; in the process too much of the natural oil is taken out to make it of good substance. I had a quantity of comb foundation which was very dark; the bees worked it out into very white comb; I obtained some more that was pretty as a picture. The bees would not touch it as long as any dark foundation was left in the hive. I could see the foundation in the comb made of the light article, but not so with the dark. I am satisfied foundation will be better with less heating and purifying. Newer wax is better.

E. D. Godfrey. I would ask Mr. Simpson if his bees change the color of the foundation?

Jas. A. Simpson. I think that some coloring matter must be used in the foundation.

E. D. Godfrey. I can tell every time where the foundation begins and where it ends. The bees do not change it, but the comb below the foundation changes with the honey that is put into it. I saw some on which letters had been painted, which was drawn out so it could be read, of the same color as when the bees began it.

L. H. Scudder. I asked Mr. Dadant his method of making wax. He said he did not use any chemicals; the only secret was in cooling it slowly. He cools his wax in a large tank, packed so as to cool very slowly.

Jas. A. Simpson. I cannot account for it; but the dark foundation was worked out first. I think every time wax is heated it becomes harder.

D. D. Palmer. Do not use iron vessels to melt wax in, or it will be dark; but use tin or other vessels.

Jas. A. Simpson. To cool wax, set it in the stove oven, and it will cool gradually as the stove cools, and the sediment will go the bottom much more readily.

What Business to Connect with Bee-Keeping.

D. D. Palmer. I have tried fruit-raising quite successfully. In getting surplus honey, in some neighborhoods, there will be none in the spring; in others, none in the summer or fall. I have found that a good crop of raspberries came very handy to sell when white clover fails, as it did this year. Fruit raising fills in these gaps.

Will. M. Kellogg. I would also add vegetables and poultry.

Jas. A. Simpson. The best thing a man can do at such times is to run for office, it will enliven his ideas and send him back to his bees more contentedly. Very many have good crops this year; I had a good crop of grapes, but they did not take the place of honey.

E. D. Godfrey. I would keep a good lot of bees, but not depend on them for a living. I aim to follow a business aside from bee-keeping to make my living.

D. D. Palmer. I have not made enough to square up accounts on my place, aside from my bees, and my other business has not paid well either.

E. D. Godfrey. Do you not think you have too many bees (over 200 colonies)?

D. D. Palmer. No; I do not.

E. D. Godfrey. It is a question not easily answered. A man must follow that business which he is most capable for.

L. H. Scudder. I can see great trouble in this. Mr. Palmer is depending mainly on his bees; in case his bees fail him he has no other business that will supply that loss.

E. D. Godfrey. Get a business that will furnish a support, and run bees as an extra.

John Hoover. I would advise the keeping of sheep, which can be done easily in many places.

Mr. Holcomb. Our family has been in the habit of keeping sheep and bees, and we find it works well. I think they can be run together very well.

L. H. Scudder. If a man has extra land for stock to run on, he can keep bees and stock too. We keep stock, but have other land than our own for it to run on.

Is there Danger of Over-Stocking?

Jas. A. Simpson. I firmly believe there is. I think if I had had many less this season I would have done better. I know a man who last spring had a barrel of bees. They stored about 16 lbs. of honey, and built the comb, too, and had no better chance than mine. I have known also where only a few colonies were kept, they done much better than mine. Such a season as this does not often occur. I have known seasons when the country could not be overstocked with bees. I think 40 colonies in the spring is plenty to begin with.

D. D. Palmer. How can we tell when we are going to have too many bees for a season?

Jas. A. Simpson. By watching the way in which the bees are succeeding.

D. D. Palmer. We can test it by watching how our bees build comb in contrast to a smaller number of colonies; if they do better, we can conclude we are over-stocked.

Will. M. Kellogg. That will do, if the bees are all under one management. One man may get more honey than another by his better management, and the strain of bees has a great deal to do with it.

L. H. Scudder. But this year one or two colonies, in isolated places, done no better than large lots.

D. D. Palmer. In South America several thousand colonies are kept in one locality. If they could run so many were they over-stocked?

E. D. Godfrey. Yes; they run themselves out. We hear no more of them.

John Hoover. Is there not much difference in the kind of bees kept? I do not think we obtained any section honey this year except from hybrids.

Much discussion was had *pro* and *con* in regard to sending delegates to Europe to instruct their people to keep bees in a better way, thereby causing them to produce more honey to compete with our own honey. Some were opposed to such a course, saying it would injure our foreign honey markets; others favored it, claiming it would increase our sales, as the more honey was advertised the more it would be bought.

Extracting Honey after the Season is over.

E. D. Godfrey. I know one man who has extracted from his bees since the season was over, and I think he will wish he had not before spring comes.

Jas. A. Simpson. I extracted from the top stories of 5 colonies, the frames below were full of brood, the honey-flow ceased, and I soon had 3 dead colonies, and this, too, when all conditions were favorable.

Will. M. Kellogg. Mr. Simpson's case does not apply here at all. I have always made it a practice to extract from my bees after the season was over, and never had any bad results follow but once; that time I returned the empty combs in the fall; the bees bred very early in the empty combs, which were sticky with honey, and came out of the cellar boiling over with bees; wet weather kept them from the spring bloom,

and I had to feed. I use a large frame and extract from all but well-filled combs, put in a division board, and pack down one side and on top with dry straw, and my bees winter better than they would on 10 or 12 combs of honey.

E. D. Godfrey exhibited and explained his chaff hive—a modification of the Shuck Universal. It has 3 sides double-walled, with about 2 or 3 inches of space filled with chaff, the inner walls being very thin, perforated boards. The 4th side is movable, and a division board is used, made of a square frame with perforated board and paper on each side, which is closed up to the bees according to the size of the colony, and in the fall the space at the side and on top is filled with chaff.

On the evening of Oct. 14th (but one day's session was held), the Society had an enjoyable sociable at the residence of Mr. L. Antrim. There many questions were discussed, but in such shape as to make it impossible to report them. L. H. Scudder read the amusing story of the "Cat and the Bees." Jas. A. Simpson related an account of a coon's fight with bees, which ended by the coon attacking and biting his master. George Bischoff told an amusing story of a dog and some bees having a squabble. Many other anecdotes were given which kept the fun going.

A basket picnic dinner and supper were given by the family of the President—Mr. L. H. Scudder—to the visiting members, in the church where the meeting was held.

Among the articles exhibited were: A chaff hive, by E. D. Godfrey, Red Oak, Iowa; several fine samples of comb foundation, by J. Van Deusen & Sons, Sprout Brook, N. Y.., queen cages from T. O. Peet, Canajoharie, N. Y., and some Cyprian bees from J. S. Hughes, Mt. Zion, Ill., who kindly sent them for inspection. Though the members looked at them closely, no one could see any difference between them and our brightest Italians. If there is a difference in looks, we failed to see it. The various bee papers were represented by sample copies.

The old officers were re-elected for the coming year, to wit: L. H. Scudder, President, New Boston, Ill.; E. D. Godfrey, Red Oak, Iowa, and Mrs. Z. Hollingsworth, Montrose, Iowa, Vice Presidents; Will. M. Kellogg, Oneida, Ill., Secretary and Treasurer. It was decided not to hold any spring meeting.

Adjourned to meet at New Boston, Ill., some time in the fall of 1881, at the call of the executive committee.

L. H. SCUDDER, *Pres.*
WILL. M. KELLOGG, *Sec.*, Oneida, Ill.

From the Lansing Republican.

Central Michigan Convention.

The Central Michigan Bee-keepers' Convention was held in the pioneer rooms of the new capitol, at Lansing, Oct. 7th, 1880; about 35 persons being present.

The season has been unfavorable for bee-keeping, the yield of honey being about half that obtained in a favorable season.

President Ashworth was absent, and W. K. Cole, of Howell, presided. The principal subject discussed was "foul brood." Prof. Cook warned people not to buy bees from a distance, as this disease is raging in adjoining counties.

The topic of "wintering" was discussed by Messrs. Harper, of Mason; Waldo, of Grand Ledge; and L. B. Baker, of Lansing.

Considerable time was taken up in inquiring about "Cyprian queens." Prof. Cook gave some interesting statements of his "Holy queen," as it is called, from the river Jordan.

The relative merits of chaff hives and cellar wintering were considered by G. L. Perry and Mrs. L. B. Baker, the former favoring the chaff hive, and Mrs. Baker cellar wintering. This lady has been very successful, never having lost a colony by the cellar method.

In comparing the merits of different hives, it was agreed that the one known as the "Baker," leads all others for simplicity, convenience and general utility.

The next meeting will be held in the pioneer rooms, May 5, 1881.

☞ The Michigan State Bee Keepers' Association will hold its annual session at Lansing, on Wednesday, December 8, 1880.

☞ The annual meeting of the North-Western Illinois and South-Western Wisconsin Bee-Keepers' Association will be held in Freeport, Ill., on the second Tuesday in January. The meeting will last two days. At the evening session on Tuesday, prominent practical bee-keepers are expected to speak. All persons interested in the production of one of the most delicious sweets are invited to attend.

JONATHAN STEWART, *Sec.*

☞ The Indiana Bee-Keepers' Association will meet in annual session on Thursday and Friday, Jan. 13 and 14, 1881. FRANK L. DAUGHERTY, *Sec.*

Letter Drawer.

Best Honey Gatherers.—This has been a poor season for honey here. We had a splendid run of basswood; I think the best I ever saw, but that was all we obtained this season. Colonies that were in condition to take advantage of the basswood, gave a fair yield. I had a few colonies of Italians and hybrids that gave 100 lbs. of extracted to the colony, during basswood bloom. I see that Mr. W. H. Gibbs, Clinton, Mass., says that from 23 colonies of black bees he obtained 1,015 lbs., while from 37 colonies of Italians and hybrids only 491 lbs. of honey, making a very favorable showing for the natives. Such has not been my experience. I have had both blacks, Italians and hybrids for the last 9 years, side by side, and the Italians and hybrids have invariably been the best honey gatherers. I weighed one colony of hybrids (very bright) for 8 or 10 days during basswood bloom, to see what it would do; it gained from 5½ lbs. to 14 lbs. a day. On Sunday, June 27, it gained 14 lbs. While on the same day a strong colony of natives by its side, gained 6 lbs.; no guess work, actual weight. They have always done in about the same proportion for me, except when honey is scarce, then the Italians and hybrids will make a living and store some honey, when the natives will do nothing but use up the stores on hand or starve to death. I raise no queens to sell.

L. G. PURVIS.

Hartford, Iowa, Oct. 30, 1880.

Melilot Clover.—I had 50 colonies of bees last spring in good condition. I fed flour early; they thrived on fruit blossoms and I expected a good crop of honey, but alas, how they failed. In the last of May and June I had to feed 125 lbs. of honey to keep them from starving. I had 10 frames full of brood and for 6 or 8 weeks the hives were full of bees. On opening a hive, not 2 lbs. of honey were to be found. I shall have to agree with the friend that writes so much on over-stocking, for there is about 200 colonies within 2 miles of my apiary, and nearly all are in the same condition. Within 4 miles, where there were but few bees, about 300 colonies did well, and I have to go there to get honey to put in my hives, as we use the same hives. I have now about 70 colonies. I have kept bees nearly 50 years and always thought when they swarmed the first time there would not be a queen under 8 or 9 days, but I had two occurrences to the contrary; a swarm with the old queen came out and my wife went to the hive to get a frame of brood for the swarm and heard the queen piping and told me so, when I came home at night. I told her she must be mistaken, but upon examination, I found brood in all stages from the egg first laid, to the hatching bees by the thousand. This was in August in buckwheat time. I had six or seven natural swarms and some of them that I have not fed 2 lbs. of honey. I shall put in frames of honey from the country next week and I expect to winter them, hoping for a better season. I have one or two thousand small sweet clover roots. These I shall send all over the vicinity, and sow 7 to 10 quarts of seed, and it will get scattered pretty well. Oh, how the bees thrived on it this year, when they could find it. A. GRIFFES.

Albion, Mich., Oct. 8, 1880.

Heavy Losses.—My bees have done well this summer. They go into winter quarters in good condition. There are only three bee-keepers left about here, out of about thirty last year; they say it does not pay. I lost more than any one else because I had more to lose. My loss was $220 at a low estimate. We had a very unfavorable winter last year. The coast is clear now for my bees and I have sown considerable white clover this year. H. BERNEY.

Custar, Mich., Nov. 8, 1880.

The National Convention.—The BEE JOURNAL came to hand very early, of this I was glad for I was anxious to see the report of the National Convention, at Cincinnati. It gave me much pleasure to see the enthusiasm with which the members were working. I read with great interest Mr. A. J. King's essay on "the Bee-keeping Industry," Dr. J. P. H. Brown's address on "Queens," and also with no less interest that of the editor of the BEE JOURNAL on the "Improved Race of Bees." In fact all the productions were so practical and to the point that every bee-keeper could read them with interest and profit. I must congratulate the Society with its success. It would have given me great pleasure to have been present at the Convention, but it came in such a busy season that it was impossible for me to leave home. I hope the Society will always meet in the same good spirit and that the future will crown it with success and a golden harvest. There is one thing I notice and feel it my duty to mention just here. The committee on nomination of officers has appointed as vice-president

for Maryland, J. M. Valentine, of Double Pipe Creek. I am the only Valentine at Double Pipe Creek, and I believe in the County or State, who keeps a large stock of bees and is making a business of apiculture. I mention this that there may be no mis-mailing and for the good of the Society.

S. VALENTINE.

Double Pipe Creek, Md., Nov. 9, 1880.

[This was an error in the initials and is duly corrected now. Thanks to Mr. Valentine for calling our attention to it.—ED.]

Prairie Hay for Winter Packing.—I obtained no surplus honey this year. I am now doubling up weak colonies for winter, and feeding dissolved sugar. I am, however, not discouraged with one poor season. I have no doubt but that we shall have a good season next year, and that it will pay to care for the bees this fall. Prairie hay is the best protection I have tried to prevent chilling the bees. I enclose my subscription for the Weekly BEE JOURNAL as the best evidence that I appreciate it, and am unwilling to do without it.

H. S. HEATH, M. D.

Muscotah, Kansas, Nov. 8, 1880.

Short Crop.—I had 85 colonies in the spring; I have obtained 4,500 lbs. of honey in the comb. It is a short crop. Three years ago I had 5 tons from 110 colonies. I have been taking the BEE JOURNAL 10 years. J. M. BENNETT.

Waterloo, Iowa, Oct. 29, 1880.

A Visit.—In September I made a long-contemplated visit to Douglas county, Ill., calling on the Rev. A. Salisbury, and he surprised me by opening hive after hive, early in the morning, without the use of a smoker. He has young Cyprian queens, now laying, bred from a Cyprian queen of Mr. Jones' importation. On my way home, I visited Chicago, and had a good chat with the genial editor of the BEE JOURNAL, and also with Mr. Coffinberry. I arrived home abundantly pleased with my visit.

J. V. CALDWELL.

Cambridge, Ill., Oct. 12, 1880.

A Long-Felt Want.—Allow me to congratulate you upon your contemplated undertaking, viz: the publication of the Weekly BEE JOURNAL. Such a JOURNAL, if properly managed, will supply a long-felt want, and I am sure would meet with a success.

GEO. W. HOUSE.

Fayetteville, N. Y., Nov. 13, 1880.

Size of Entrance.—Please state in the AMERICAN BEE JOURNAL the proper sized opening to a hive, that will allow free egress and ingress to workers, but prevent all possible escape of drones or a laying queen. Mr. Garlick gives 5-32 of an inch—is not that too small?

W. E. FLOWER.

Shoemakertown, Pa., Oct. 18, 1880.

[Five thirty-seconds of an inch will allow ingress and egress to the worker bees, but such a small entrance is quite detrimental to the welfare of the colony in the working season. Often quite a quantity of pollen may be noticed at the entrance of such a hive, caused by the bees scraping themselves while entering with their load. Every plan suggested to prevent the queen and drones from going out and in with the workers is objectionable on this account.—ED.]

Bees have not done Well.—The BEE JOURNAL has been a welcome visitor, I have learned much from it. I am glad it is to be published weekly next year. My bees have not done well the past season; it has been too wet and we have had too many north-west winds. I have now only 9 colonies, and I think of trying chaff packing for winter. Success to the Weekly BEE JOURNAL.

F. W. BURTNETTE.

Glass River, Mich., Nov. 5, 1880.

A Prediction for Next Year.—I think this has been the poorest season for bees, in this part of the country, that we have ever experienced. I had about 110 colonies of bees on the first day of May. By putting together and feeding, I have reduced them to 103 colonies. It will take about 150 lbs. of sugar and 50 lbs. of honey to get them ready for winter. By estimate, we have 245 lbs. of comb and 1,049 lbs. of extracted honey. I think our bees have done as well or better than other bees around here. My crop is mostly disposed of at 15 and 20c. per lb. We must make up in price to partly compensate for the loss in quantity. I hear of some quite extensive bee-keepers within about 20 miles, that extracted during linden bloom, who will now have to feed it back or let their bees starve. I think bees gathered about half enough this fall to winter on. We had two short harvests: apple and linden. White clover was generally winter-killed. Pastures nearly dried up during July and the first part of August, so that people had to feed their cattle. We have had some heavy rains

since that time, and the young clover has grown up nicely, from which I predict a good season for bees in these parts next year. Perhaps at some future time I may give my mode of management and preparing bees for winter.

W. C. NUTT.

Otley, Iowa, Oct. 21, 1880.

Highly Pleased.—I enclose my subscription for the Weekly BEE JOURNAL for 1881, and I am highly pleased with the proposed "new departure."

W. A. HORTON.

Macy, Ind., Nov. 6, 1880.

Packed with Chaff.—I have packed 33 colonies with chaff in boxes on the summer stands. Three for experiment are supplied with upper stories (Simplicity) filled with chaff. All are covered with pieces of rag carpet over the Novice cushion, with the cover removed.

J. CHAPMAN.

Home, Mich., Nov. 6, 1880.

A Fair Crop.—Our honey crop is over for this season, and I have my bees snugly prepared, on their summer stands, for going through the winter. I had what Dakota apiarists would call a fair crop. From 11 colonies in the spring I increased, by natural swarming to 20, and obtained 1,060 lbs. of comb and extracted honey, of splendid quality. I am finding a ready market at home for it at 15 and 20c. per lb.

W. M. VINSON.

Elk Point, Dakota, Oct. 19. 1880.

Bee Pasturage.—The season's work is now over, and I can make a report without guessing at it. I have 50 lbs. of box honey for each colony that I started with in the spring, and half as many swarms as colonies. This I call good for this locality, although I believe I can do 20 per cent. better another year. My bees suffered badly from being brought out of the cellar, in the spring, on the evening before a cold, damp day. They came out of the hives, and chilled before they could get back. I see the subject of honey plants is attracting much attention just now. From what I read, I must think that no one plant is best for all sections of the country and all seasons. Cleome or Rocky Mountain bee plant has done exceedingly well in this vicinity this year. It seemed to be literally alive with bees from morning till night, all the while it was in bloom. If it does as well another year, nearly every bee-keeper will sow some of it.

F. WILCOX.

Mauston, Wis., Oct. 15, 1880.

Appreciative.—Hurrah for the Weekly BEE JOURNAL! This is a progressive age, and we are glad to see that the editor of our favorite JOURNAL has the spirit of progression, and is determined to place it upon the highest pinnacle among the bee literature of the day. With pleasure I shall hail its coming. I would suggest, however, that it be published in its present form, as being more convenient for binding for future reference; with double its present matter, it would make a book of convenient size and form, as with its present size I have two volumes bound in one book. I have been a subscriber and constant reader of the AMERICAN BEE JOURNAL for more than ten years, and I have every volume complete that has been published except one number, and have most of them bound. I would not take $100 for them. Long live the AMERICAN BEE JOURNAL.

W. D. WRIGHT.

Knowersville, N, Y., Nov. 3, 1880.

[We would much prefer keeping the BEE JOURNAL its present shape, but many things conspire to make it impracticable. First, we have aimed to greatly increase the amount of reading matter, and give it weekly, with but a very trifling increase in price, in order to accommodate our correspondents and meet the necessities of the thousands who cannot afford a high-priced JOURNAL. Second, the additional work in folding and stitching the JOURNAL each week (in addition to its expense), would cause delays in the regularity of our issue which would give dissatisfaction to our readers and be unendurable to its publisher. And lastly, we expect to give a weekly which, at the end of the year, when neatly bound, will be as attractive in appearance and convenient for reference, as in the old form, and that all may feel they have received more than their money's worth.—ED.]

Never failed to obtain a good crop.—Many have failed to make it profitable to keep bees, getting no surplus honey. I have kept bees here 17 years and always have a good yield of honey, and I think this is by all means the best honey location in our country, if not in the world. And my reasons are these, I am located on the north edge of a rich farming district, where within 4 miles there are over 3,000 bearing apple trees, plums, cherries, &c., in abundance.

On the north is an immense old lumber region covered with wild cherries, plums, basswood, willows, elm, maples, wild berries, in immense quantities, white clover from spring until fall, and thousands of other wild honey producing plants, so that the bees find business from the time the snow leaves in the spring, until it covers the ground in the fall. L. MARTIN.

Hesperia, Mich., Nov. 10, 1880.

Good Honey Crop.—The past has been a good season for bees and honey in Southwestern Iowa. I have had swarms issue, and gather from 75 to 85 lbs. of surplus honey in the combs. Through August and September the colonies were in splendid condition and strong in numbers. I use the Kretchmer hive. I wish the BEE JOURNAL success.

S. C. SMITH.

Whitley's Grove, Iowa, Oct. 24, 1880.

Late Breeding.—My Italians have a little honey to spare, but the blacks, as a rule, are not half supplied for winter. The Italians gave some surplus in the early part of the season. The queens stopped laying about 10 days ago, and I think they will do as they did in 1877; then they stored enough in October to winter on, and reared two lots of brood in October and November, and went through the winter and spring in good order. H. L. JEFFREY.

Woodbury, Conn., Oct. 4, 1880.

Bees in New York, etc.—Another bee season has passed, with its pleasures and disappointments. I commenced the season with 22 colonies in fair condition. My honey harvest was 168 lbs. of extracted, and 338 lbs. of comb or box honey, making in all 506 lbs.; this is 22 lbs. to the colony. I increased 15 colonies, making 37 in all. These are all packed now in chaff and dry leaves, on their summer stands. Bees are in good condition for winter. The price for honey has been from 8 to 12½c. per lb. for extracted, and 12½ to 15c. per lb. for box honey. I am very thankful that the BEE JOURNAL is to issue every week, and give us double the amount of reading matter during the year, and, without doubt, double the amount of knowledge; and those who keep but few colonies, and do not feel able to subscribe for the weekly, can enrich their minds with bee knowledge for only 50c. a year. As far as I am concerned, I must have the full documents on the bee, for to the AMERICAN BEE JOURNAL I have to credit all my success. Please find enclosed $2 for the weekly for 1881. In the November number I find a pen-picture drawn by the Cincinnati *Gazette* of the editor of the AMERICAN BEE JOURNAL; how would it be, if you would give your readers in the first issue in January, 1881, a photographic picture of yourself?

WM. BOLLING.

Dunkirk, N. Y., Nov. 13, 1880.

Spider Plant, etc.—I started my seeds in the hot-bed, and had no trouble whatever in making them grow. Mine commenced to blossom about the 4th of July, and continued until frost killed them. All the reports about the large yield of honey from them are true, so far as my experience goes; but I doubt very much the *pay* part of raising any crop for honey alone, that has to be set out every year, and hoed and cultivated as thoroughly as the spider plant seems to require. If it would seed itself year after year, as the sweet clover does, I would not hesitate to pronounce it one of the best honey plants I know of. I see by the bee papers that in a great many sections buckwheat is not at all reliable as a honey-yielder; but in this locality it has only failed once in the last 10 years, and I shall depend mostly on that for honey from cultivated crops, until something better is found. I expect to experiment more or less this coming year with sweet clover, spider and Simpson plants, but shall certainly discard any or all of them that are not re-seeders.

O. O. POPPLETON.

Williamstown, Iowa, Nov. 15, 1880.

[We heartily commend sweet clover to *every* bee-keeper. Its easy cultivation, ability to withstand drouth and wet, long-blooming season, self-seeding nature, and its beautiful, rich honey, will certainly make it a profitable favorite with all who give it a fair trial.—ED.]

Honey Crop.—Since leaving home Aug. 23d, I have traveled through Illinois, Michigan and Indiana, and find that the honey crop is very short. Our train being side-tracked near Mr. Heddon's branch apiary, I looked over it and never saw bees doing better. Goldenrod was in bloom, and the bees were enjoying it exceedingly. The valley of the Mississippi river generally, this year, has failed to yield honey, and many bees will starve. Some are selling their bees at nominal figures. In Central Iowa bees have done nicely; ours have not done much, though I have fed a little all the time to keep them in good order. A. D. DILLY.

Des Moines, Iowa, Sept. 20, 1880.

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PROSPECTUS FOR 1881.

THE AMERICAN BEE JOURNAL

Published every Wednesday, by

THOMAS G. NEWMAN,

EDITOR AND PROPRIETOR,

974 WEST MADISON ST., CHICAGO, ILL.

TERMS OF SUBSCRIPTION:

WEEKLY—(52 numbers) **$2.00** a year, in advance. Three or Six Months at the same rate.

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The 6 above-named papers.....	5 75..	5 00
Prof. Cook's Manual (bound in cloth)	3 25..	3 00
Bee-Culture (T.G.Newman).....	2 40..	2 25

For Semi-monthly Bee Journal, $1.00 less.
For Monthly Bee Journal, $1.50 less.

☞ A few copies of the first edition of Cook's Manual may still be obtained at this office, at 30c. each or 4 for $1.00.

Honey and Beeswax Market.

BUYERS' QUOTATIONS.

CHICAGO.

HONEY.—Light comb honey held at 20@22c. in 1 and 2 lb. sections; in larger packages, 15@18c.; dark, 12@14c. Extracted, 7@9c.

BEESWAX.—Choice yellow, 20@23c; darker, 15@17.

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HONEY.—White, in single-comb sections, 17@19c. Larger boxes, 2c. per lb. less. Extracted, 7@10c.

BEESWAX.—Prime quality, 20@22c.

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HONEY.—Extracted honey, 8@10c. Choice white comb honey, 16@18c.

BEESWAX—20@25c. C. F. MUTH.

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HONEY—Comb honey, 12@14c. Extracted, choice white, 7@7½c.; off-colors, 6@7c.

BEESWAX—22@24c., as to color.

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We desire to call the attention of our readers to one of the greatest newspapers of the age—one that secures the best writers in this country and Europe, regardless of expense; has the best and fullest book reviews of any paper in the country; has able articles upon financial subjects; has departments devoted to Fine Arts, Biblical Research (something that cannot be found in any other newspaper in the United States), Farm and Garden, Insurance, Weekly Market Reports, Cattle Market, Prices Current, Dry Goods Quotations, etc.—in fact, a newspaper fully suited to the requirements of every family, containing a fund of information which cannot be had in any other shape, and having a wide circulation all over the country and in Europe. We refer to THE INDEPENDENT, of New York. "The largest, the ablest, the best." See advertisement, in another column, and send for specimen copy.

☞ Instead of sending silver money in letters, procure 1, 2 or 3 cent stamps. We can use them, and it is safer to send such than silver.

☞ When changing a postoffice address, mention the *old* address as well as the new one.

Local Convention Directory.

1880.	*Time and Place of Meeting.*
Dec. 8.—	Michigan State, at Lansing, Mich.
18—	Madison County, at Indianapolis, Ind.
1881.	
Jan. 11—	N. W. Ill. and S. W. Wis., at Freeport, Ill.
13, 14—	Indiana State, at Indianapolis, Ind.
18—	Northeastern Wisconsin, at Oshkosh, Wis.
Feb. 2—	Northeastern, at Rome, N. Y.
5, 6—	Ashtabula Co., O., at Andover O. W. D. Howells, Sec., Jefferson, O.
April 5—	Central Kentucky, at Winchester, Ky.
May 5—	Central Michigan, at Lansing, Mich. Wm. Williamson, Sec., Lexington, Ky.
Sept.—	—National, at Lexington, Ky.
	—Kentucky State, at Louisville, Ky.

☞ **In order to have this Table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—ED.**

1865.— THE —1880.

HONEY HOUSE.

C.O.PERRINE, 54 Mich. Ave. Chicago.

Will buy at a fair price, for cash, any amount of

COMB OR EXTRACTED HONEY.

As a Manufacturer of

COMB FOUNDATION,

I can say my goods have given entire and universal satisfaction. The ruling low prices were made by me, and any one desiring any considerable quantity would do well to consult me before buying elsewhere.

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AND BEE-KEEPER'S ADVISER.

The *British Bee Journal* is published monthly at $1.75, and contains the best practical information for the time being, showing what to do, and when and how to do do it. **C.N.ABBOTT,** Bee Master, School of Apiculture, Fairlawn, Southall, London.

C. OLM'S

Comb Foundation Machine.

Send for Circular and Sample.

9tf **C. OLM,** Fond du Lac, Wis.

BARNES' PATENT

Foot-Power Machinery

CIRCULAR and SCROLL SAWS

Hand, Circular Rip Saws for general heavy and light ripping. Lathes, &c. These machines are especially adapted to **Hive Making.** It will pay every bee-keeper to send for our 48 page Illustrated Catalogue.

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Italian Queens or Colonies.

Eighteen years' experience in propagating Queen Bees from imported mothers from the best districts of Italy. Persons purchasing Queens or Colonies from me will get what they bargain for. Send for circular.

WM. W. CARY,

3-tf Colerain, Franklin Co., Mass.

ITALIAN QUEENS—All bred from Imported Mothers of my own importation. Dollar and Tested Queens from 1st April to 1st November. Full Colonies and Nuclei: Bee-Keepers' Supplies of all kinds; Comb Foundation, etc.

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NEW VEGETABLES A SPECIALTY.

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